Fig. 1

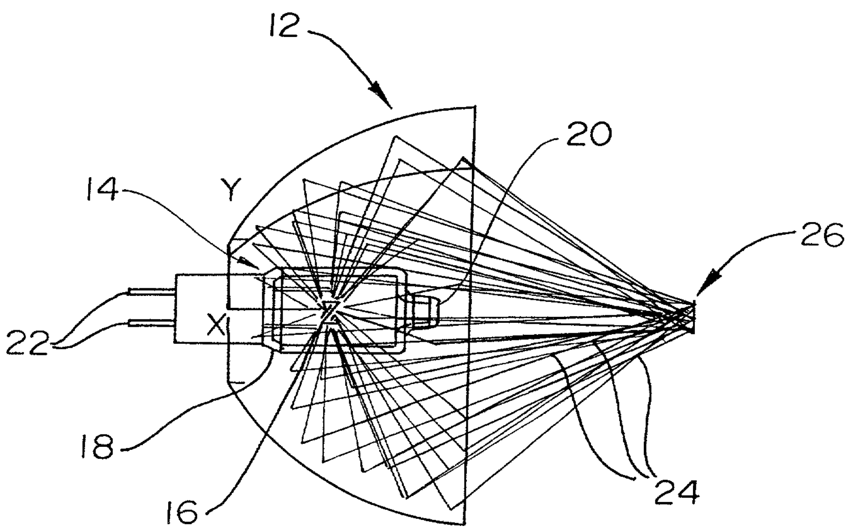


Fig. 2

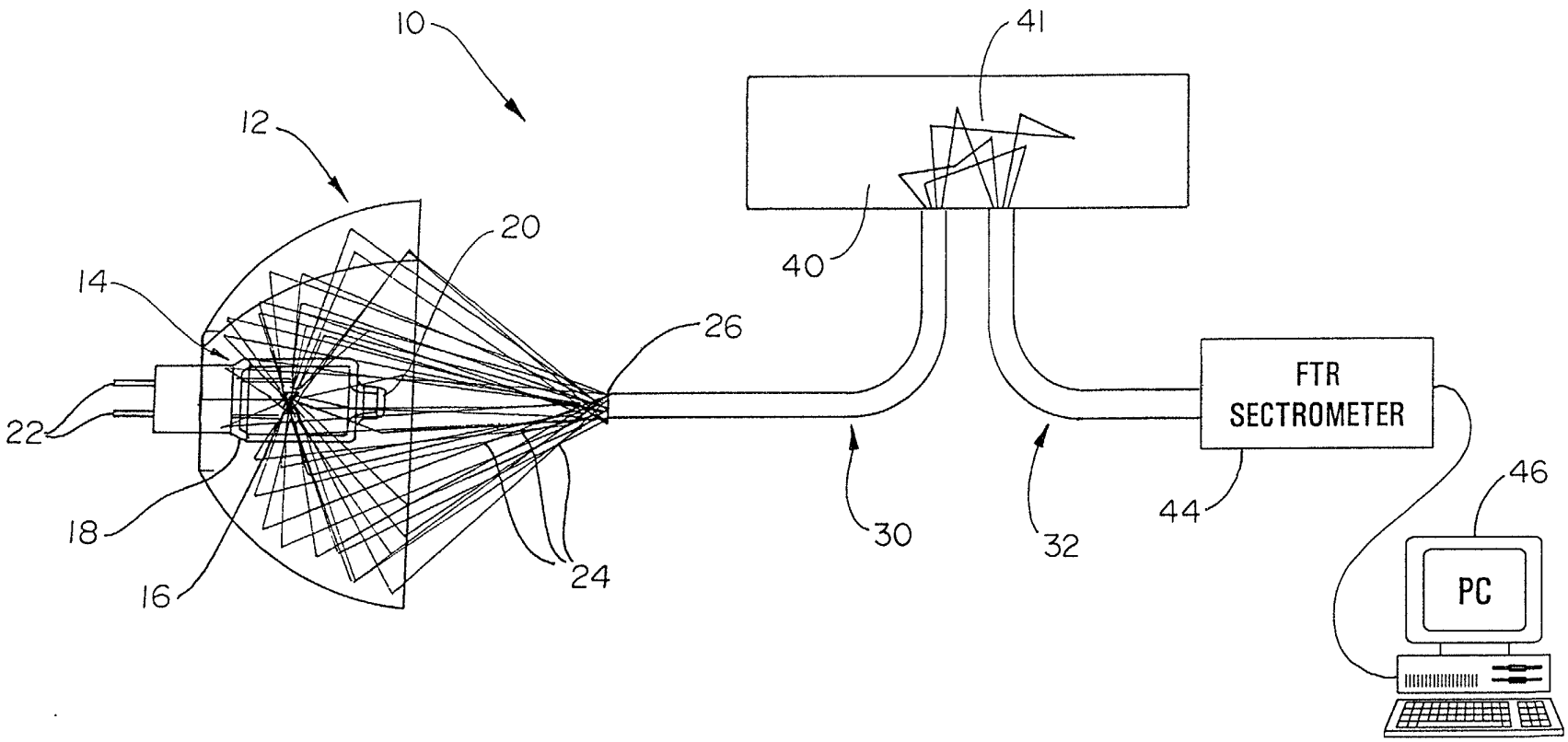
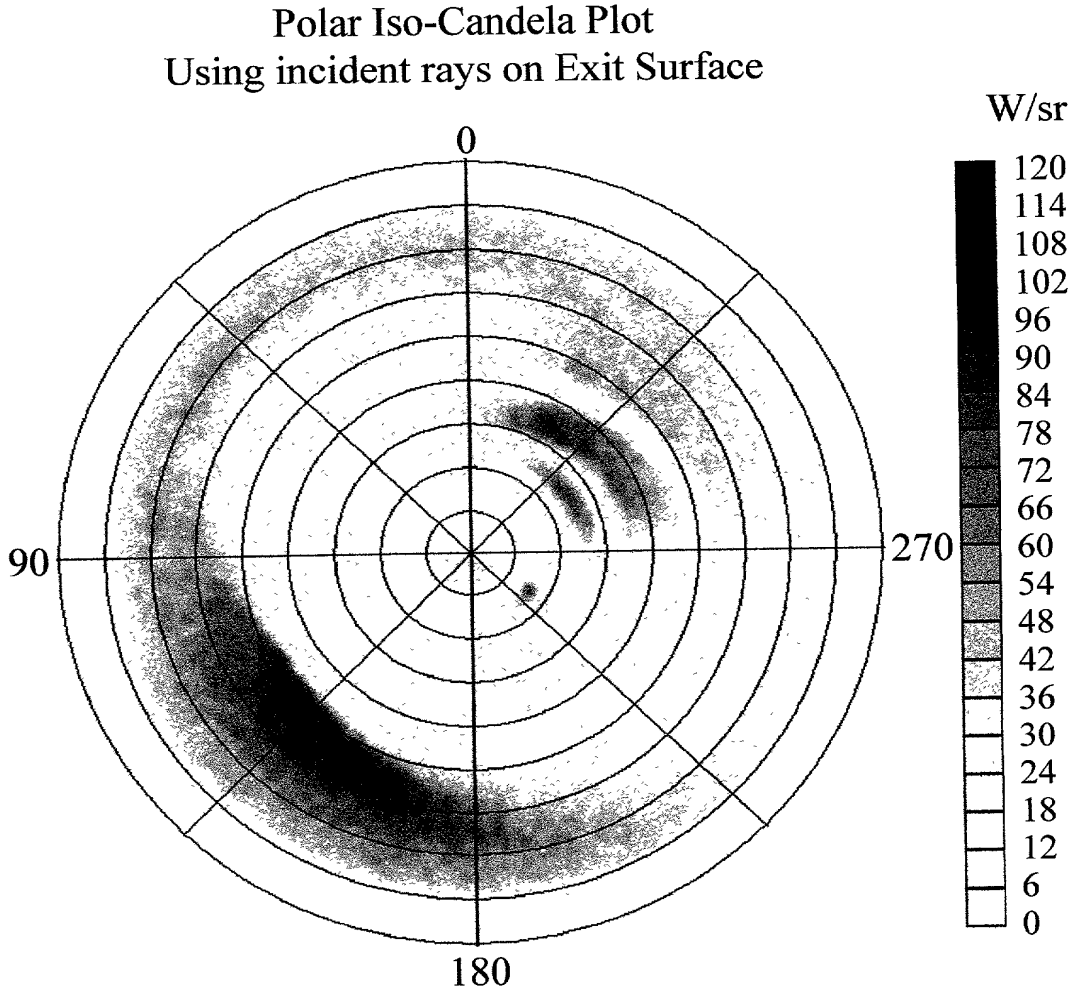
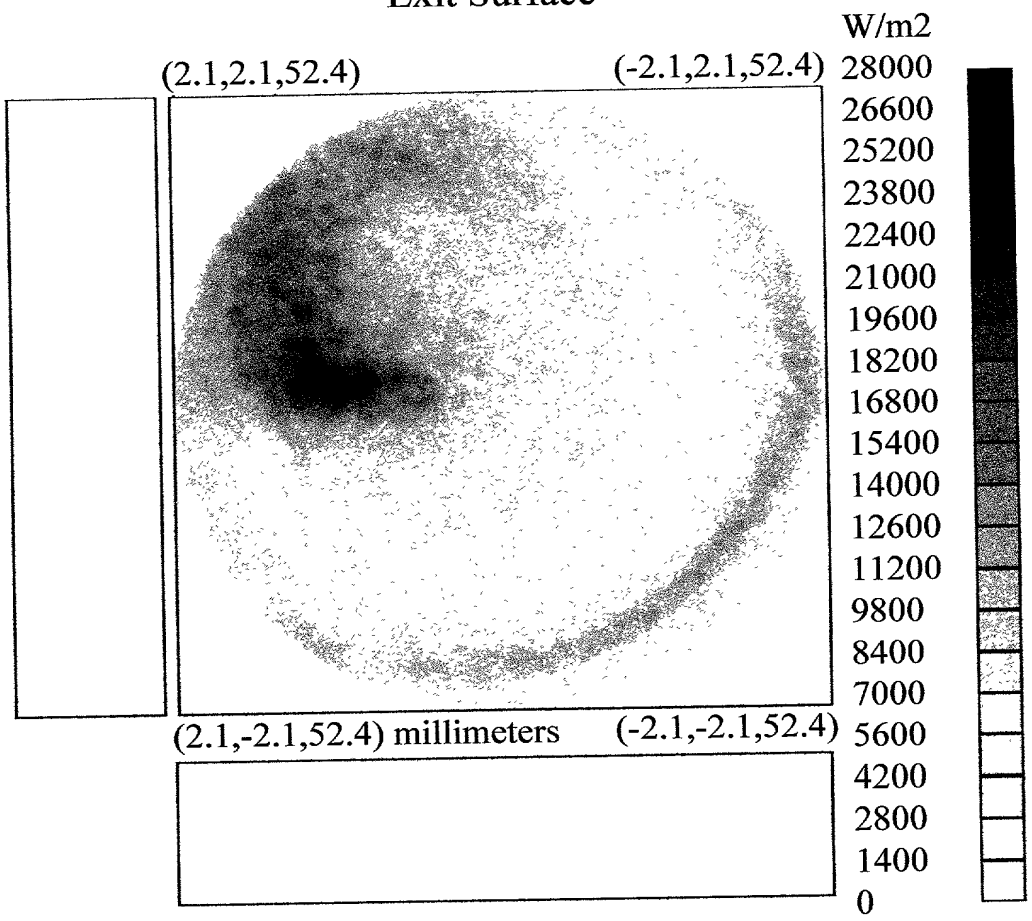


Fig. 3a



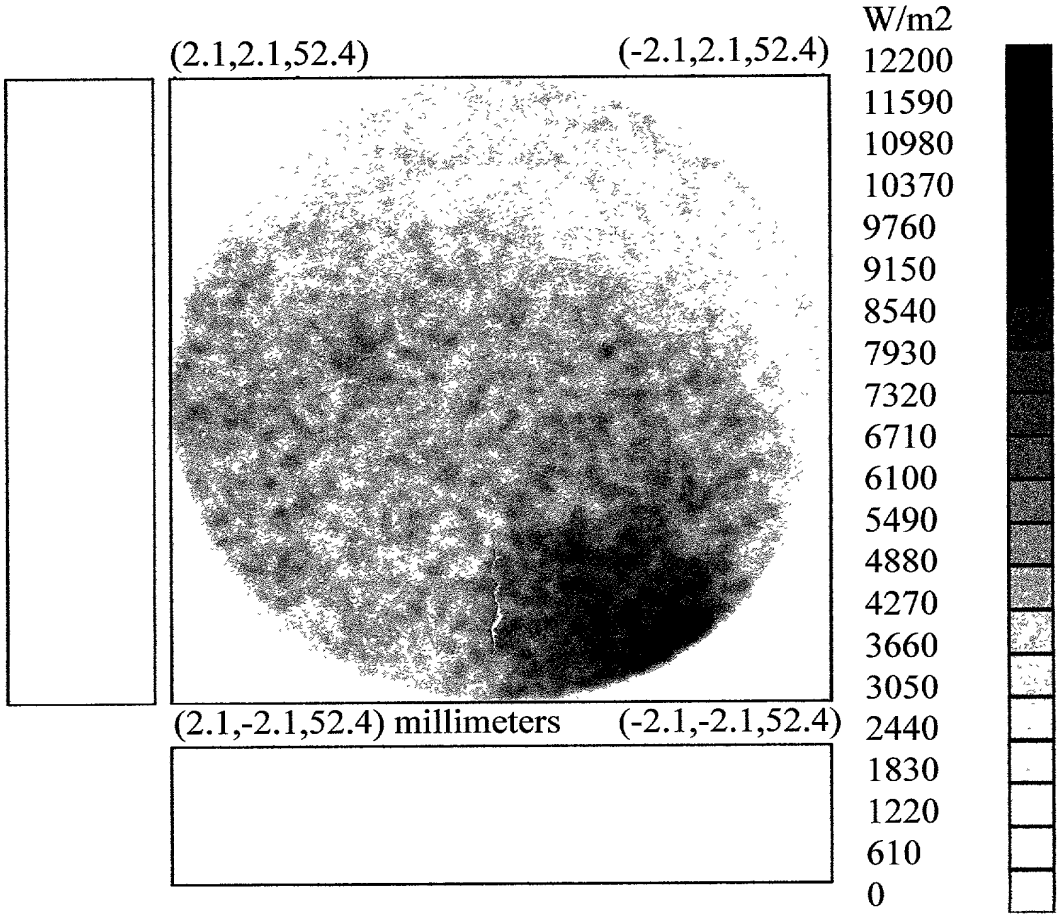
Data covers +/- 50.000 degrees from Normal
Collected Flux: 45.6 W, 101892 Rays
Min:4.8629e-007 W/sr, Max:119.54 W/sr,
Total Flux: 45.6 W

Fig. 3b



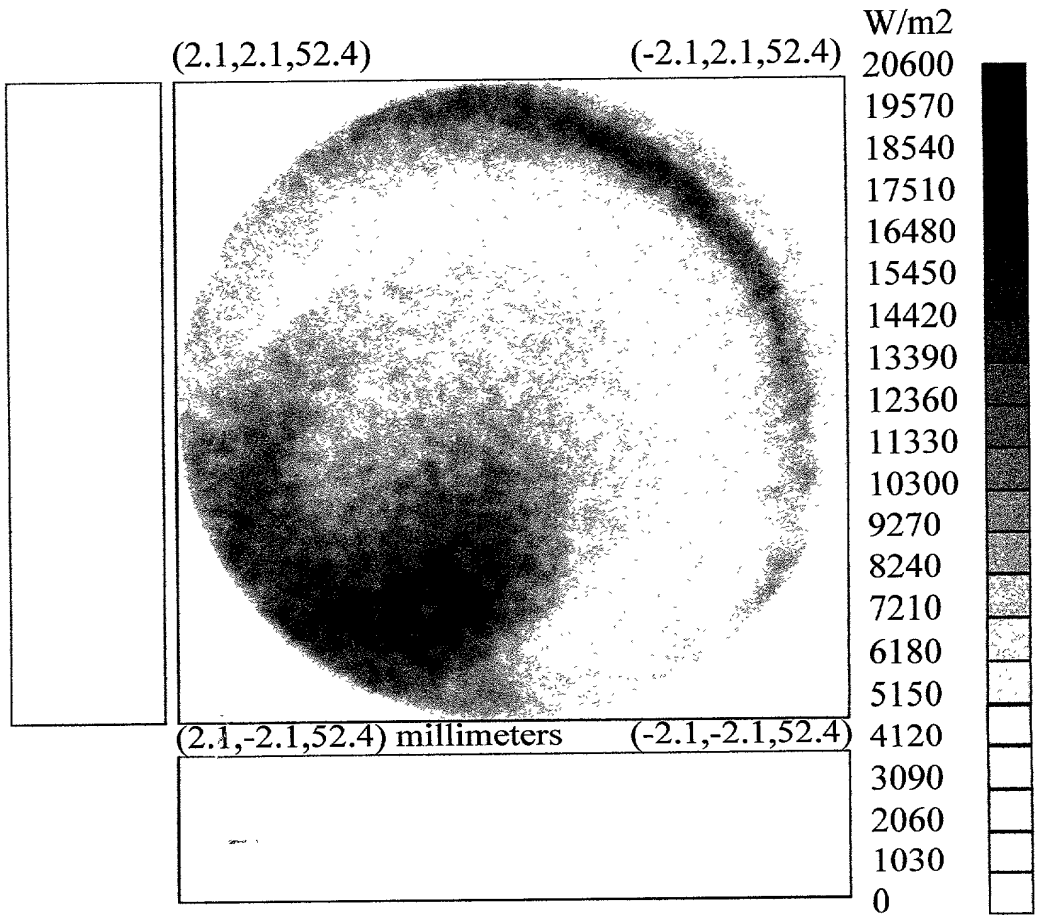
Irradiance Min:0.00023877 W/m2, Max:27743 W/m2,
Normalized Flux:0.096859 104037 Incident Rays

Fig. 3c



Irradiance Min:3.4712e-005 W/m2, Max:12099 W/m2,
Normalized Flux:0.054985 59253 Incident Rays

Fig. 4a



Irradiance Min:0.00042231 W/m2, Max:20485 W/m2,
Normalized Flux:0.094876 101892 Incident Rays

Fig. 4b

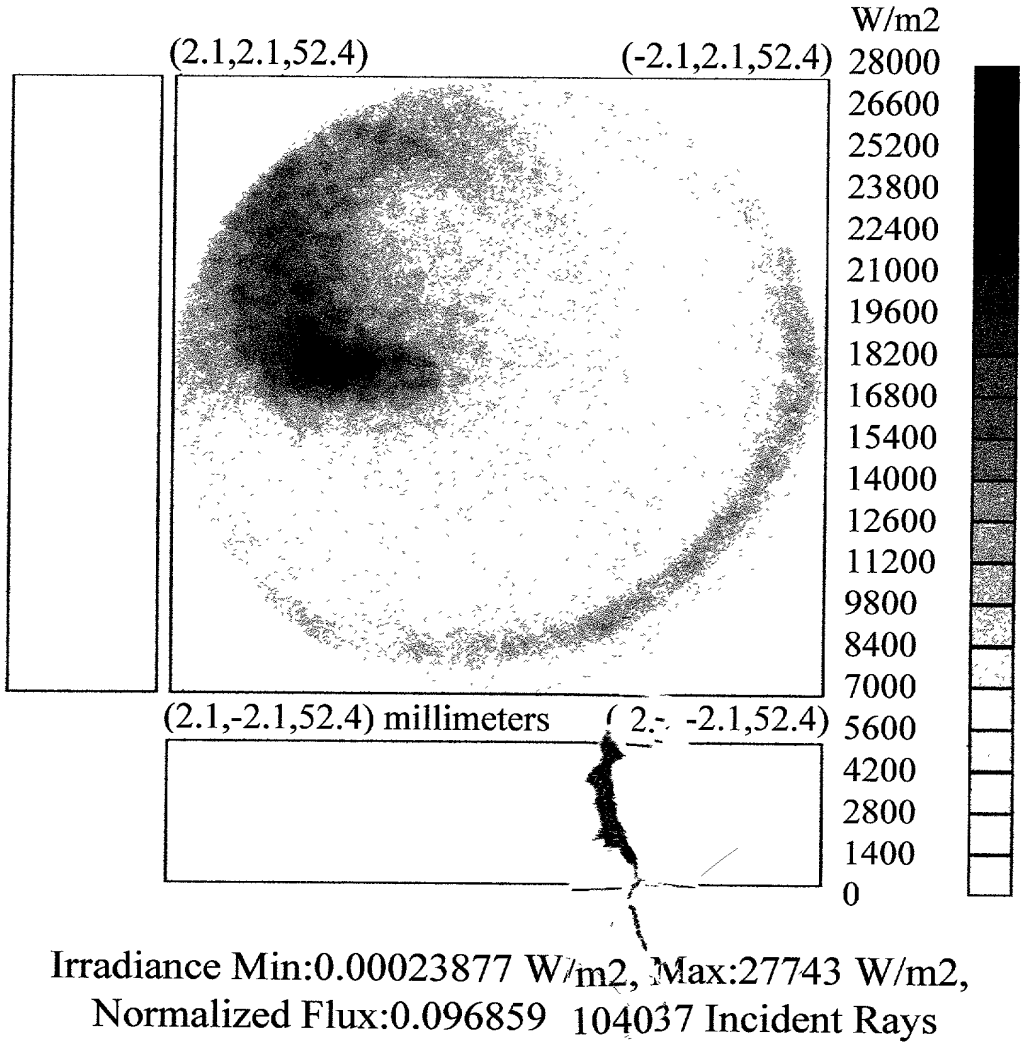
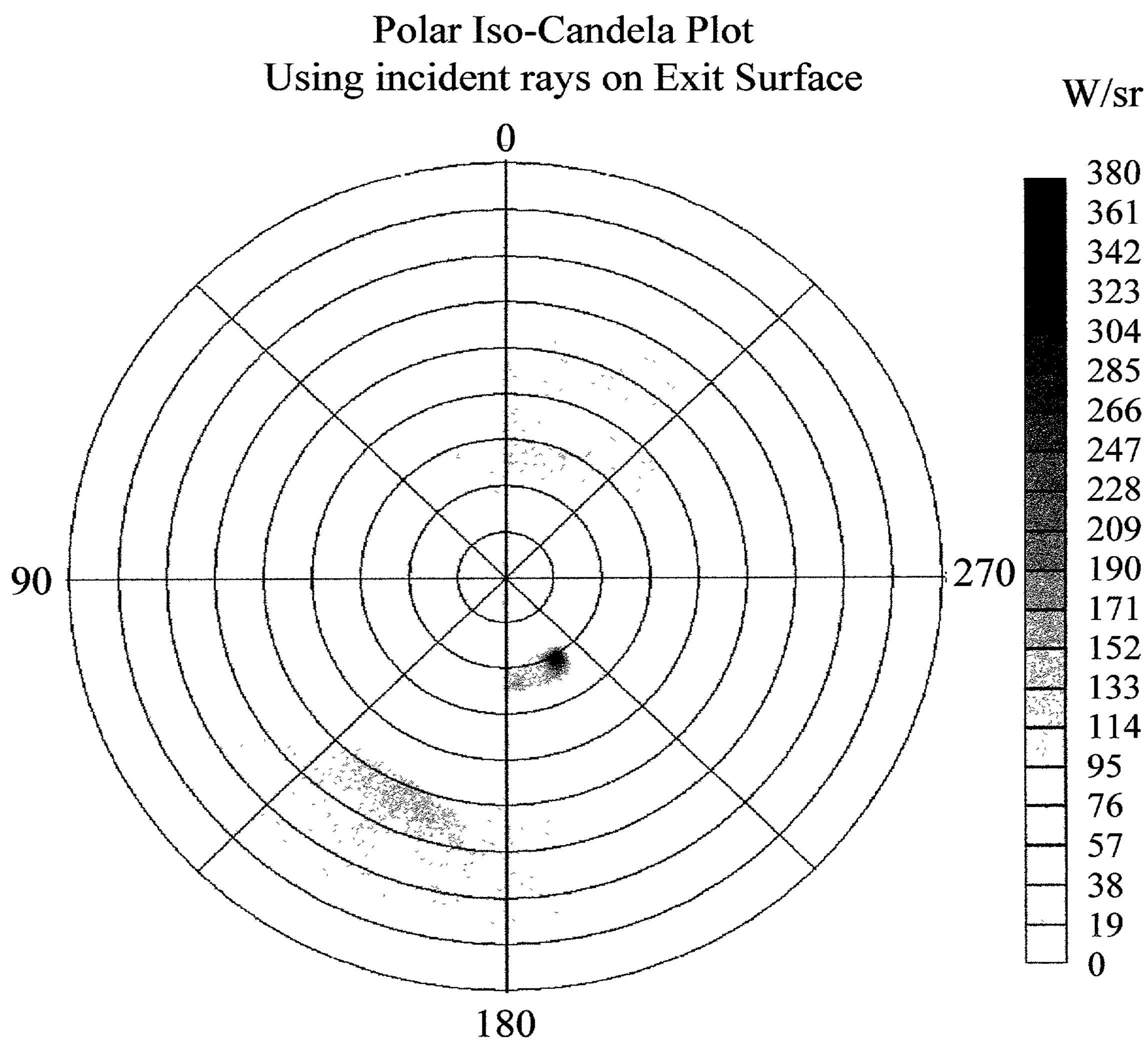

Total – Irradiance Map for Incident Flux
Exit Surface
W/m2
(2.1,2.1,52.4)
(-2.1,2.1,52.4)
28000
26600
25200
23800
22400
21000
19600
18200
16800
15400
14000
12600
11200
9800
8400
7000
(2.1,-2.1,52.4) millimeters
5600
4200
2800
1400
0
Irradiance Min:0.00023877 W/m2, Max:27743 W/m2,
Normalized Flux:0.096859 104037 Incident Rays

Fig. 4c



Data covers +/- 50.000 degrees from Normal
Collected Flux: 26.431 W, 59253 Rays
Min:2.4668e-008 W/sr, Max:365.41 W/sr,
Total Flux: 26.431 W

Fig. 5

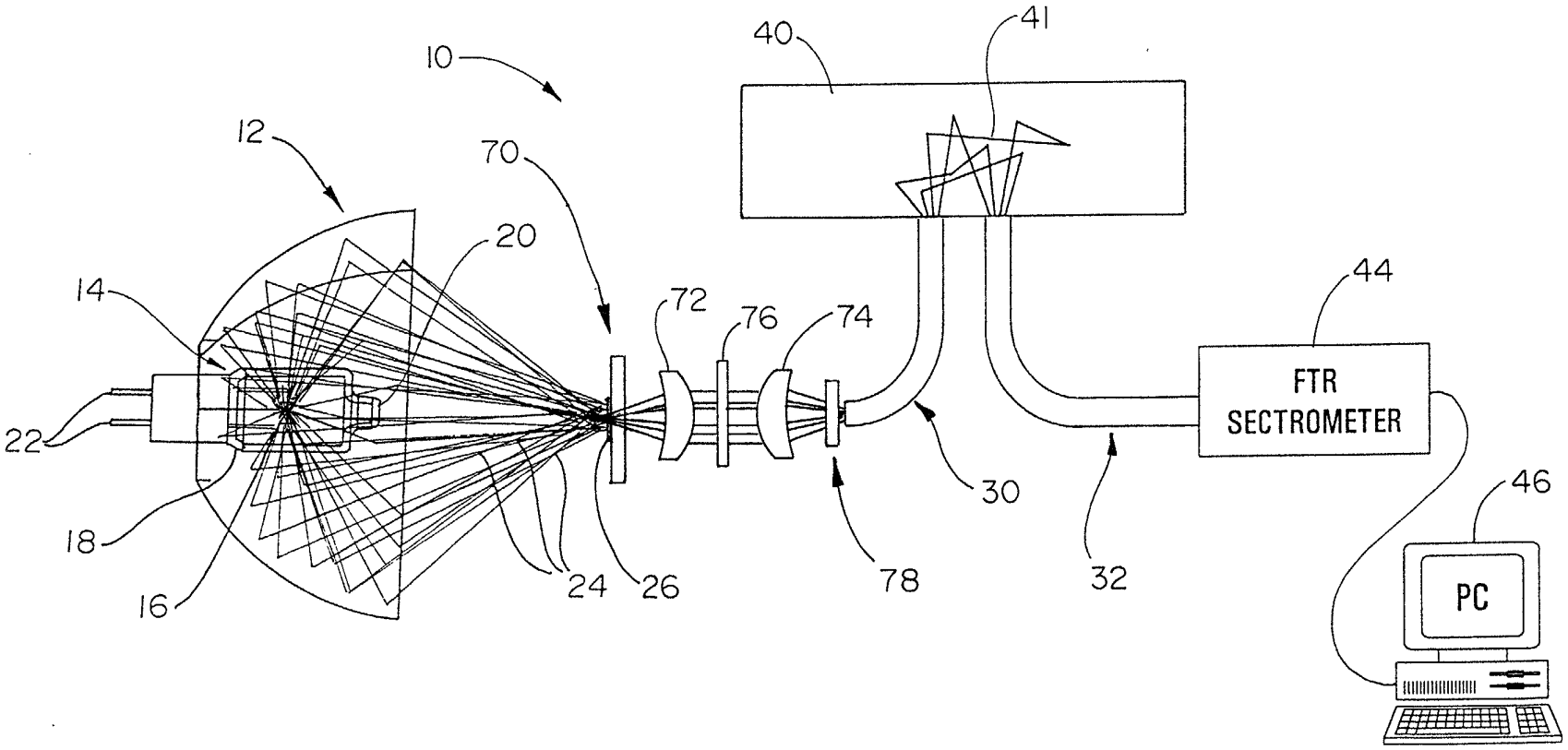

10
12
14
16
18
20
22
24
26
30
32
40
41
44
46
70
72
74
76
78
FTR
SECTROMETER
PC

Fig. 6

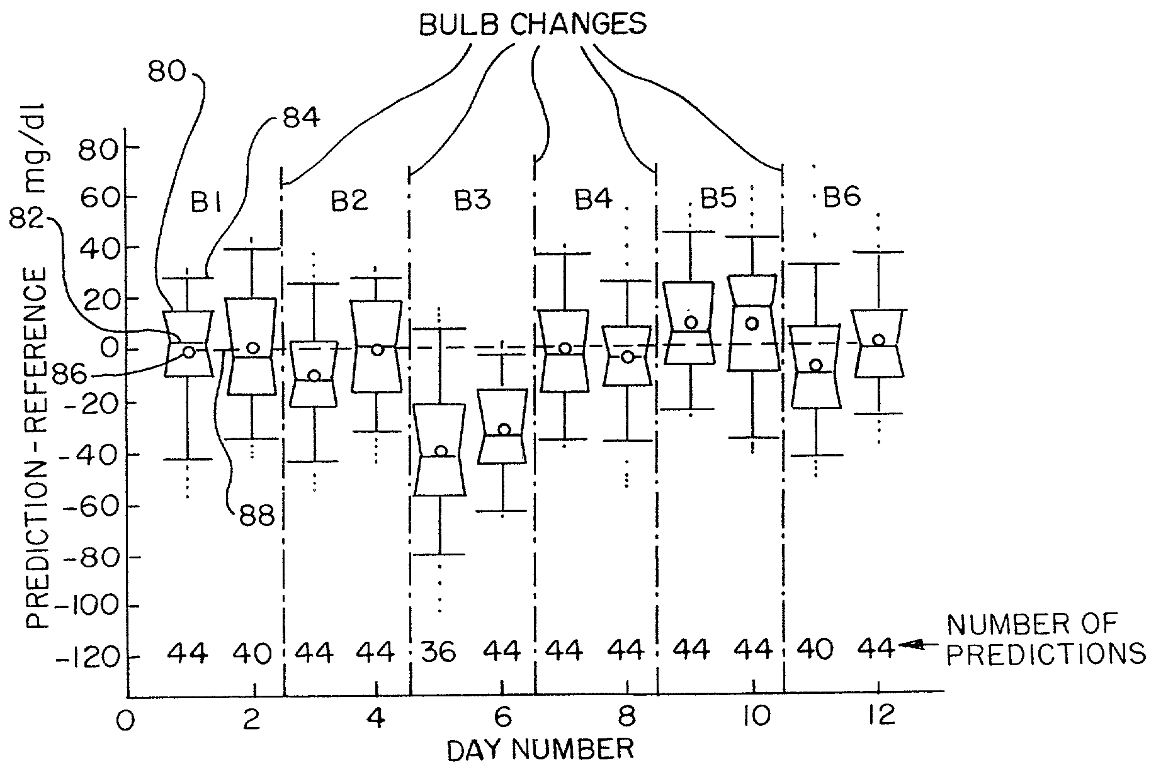


Fig. 7

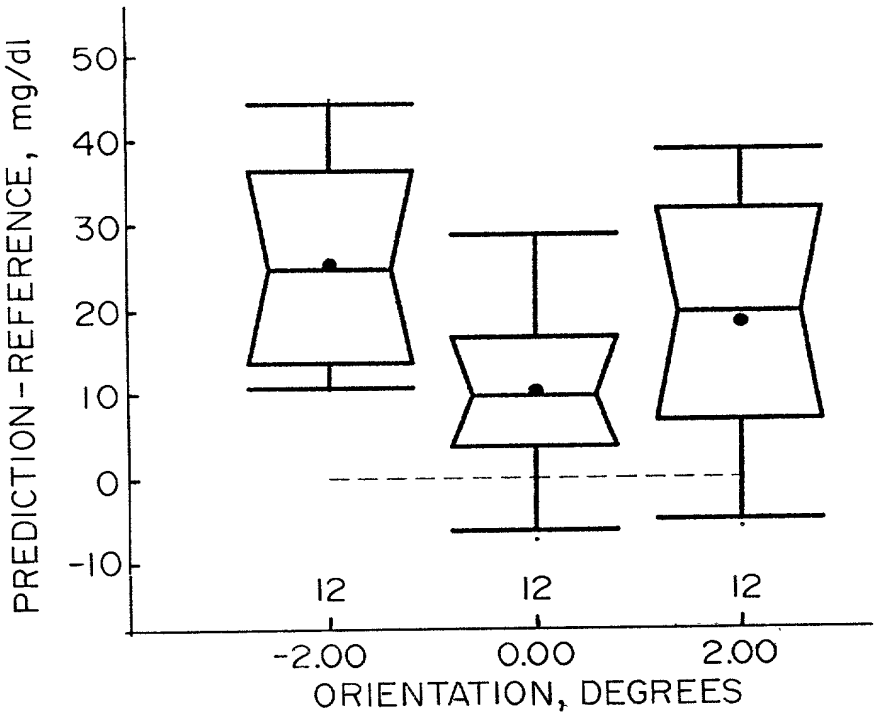

PREDICTION-REFERENCE, mg/dl
50
40
30
20
10
0
-10
12
12
12
-2.00
0.00
2.00
ORIENTATION, DEGREES

Fig. 8

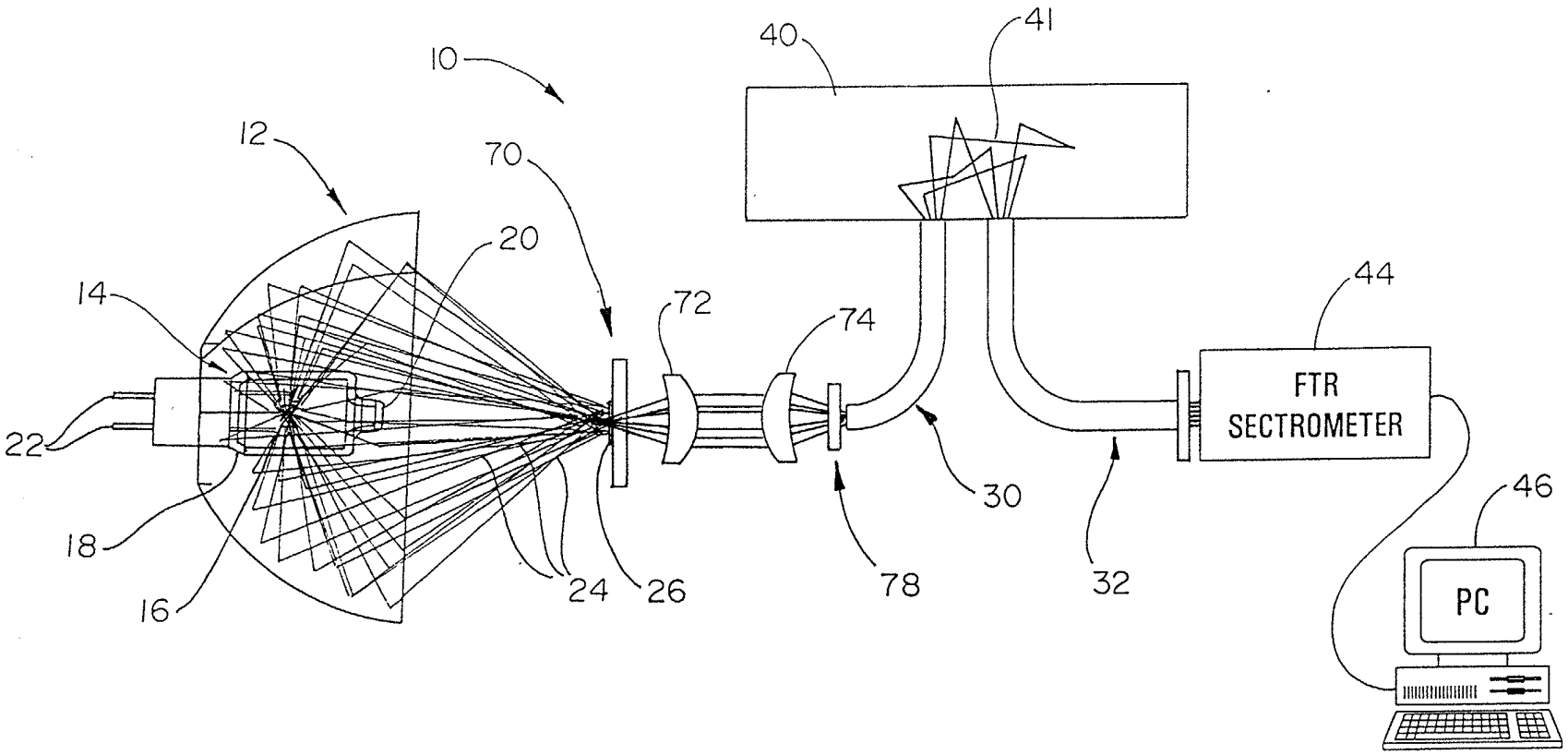
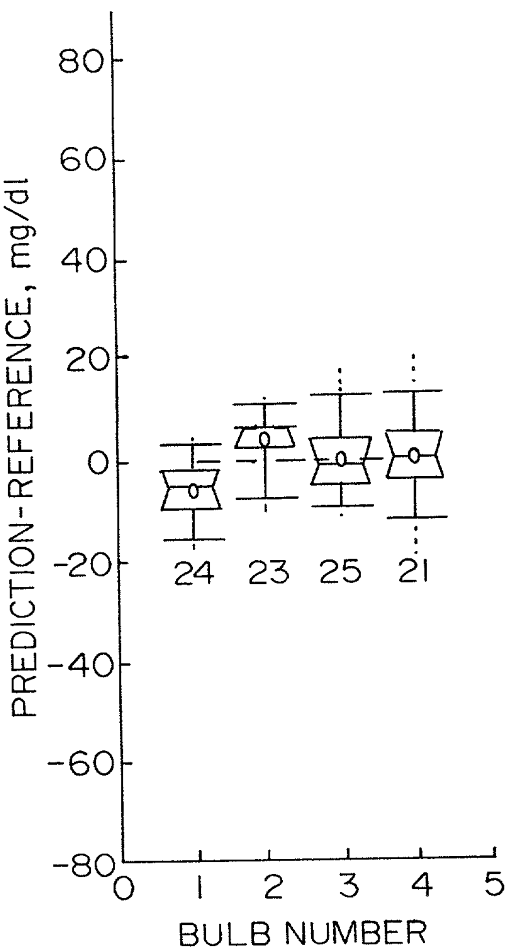
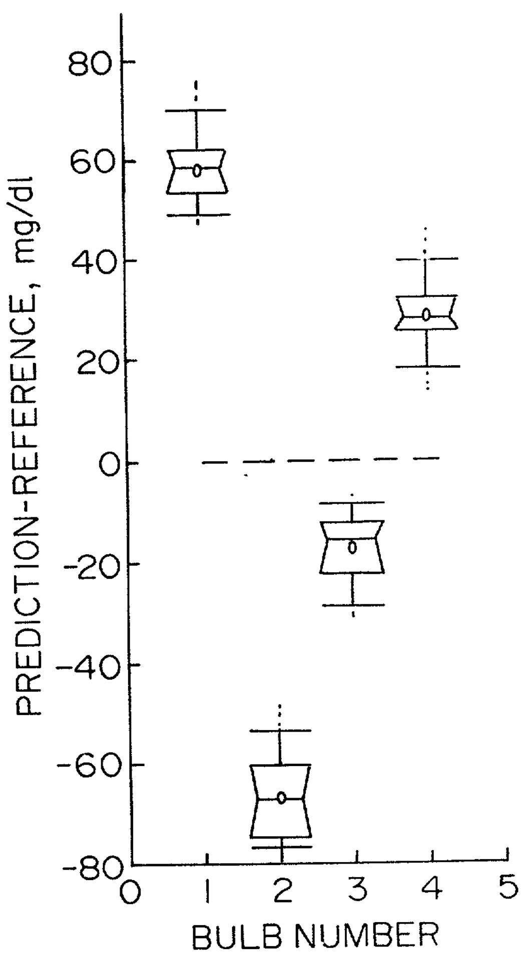


Fig. 9A



PREDICTION-REFERENCE, mg/dl
80
60
40
20
0
-20
-40
-60
-80
24
23
25
21
0
1
2
3
4
5
BULB NUMBER

Fig. 9B



PREDICTION-REFERENCE, mg/dl
80
60
40
20
0
-20
-40
-60
-80
0
1
2
3
4
5
BULB NUMBER

Fig. 10

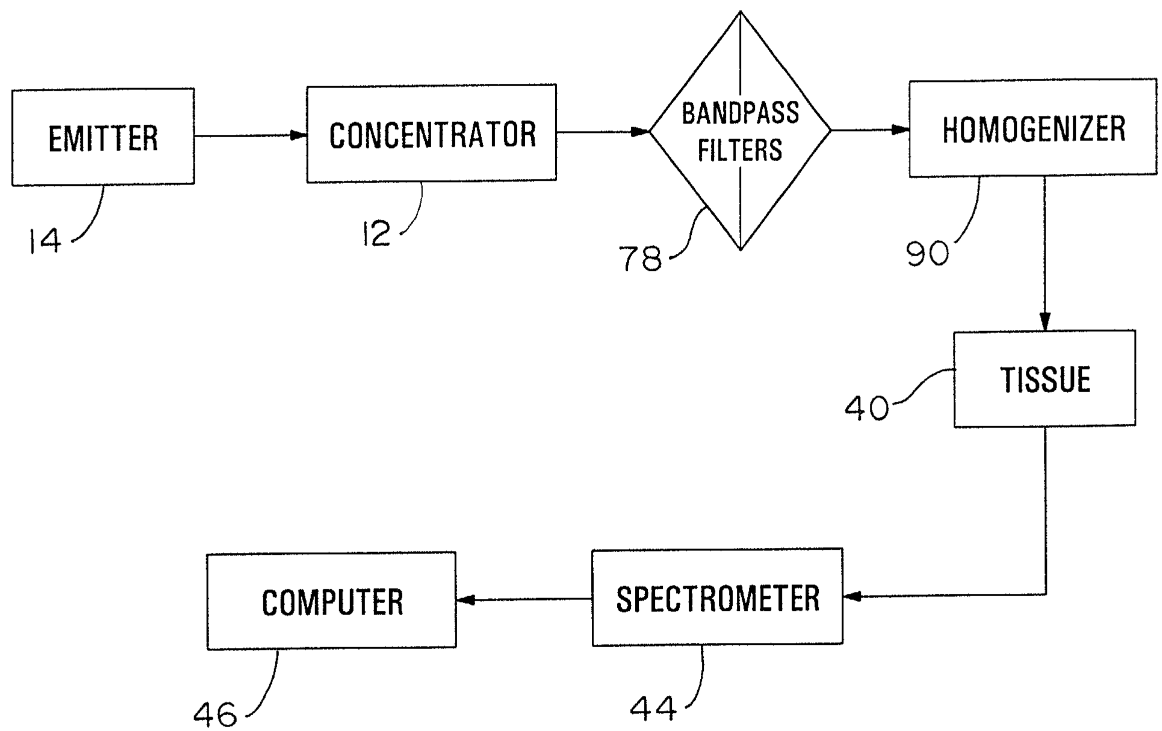

EMITTER
14
CONCENTRATOR
12
BANDPASS FILTERS
78
HOMOGENIZER
90
TISSUE
40
SPECTROMETER
44
COMPUTER
46

Fig. 11A

Fig. 11B

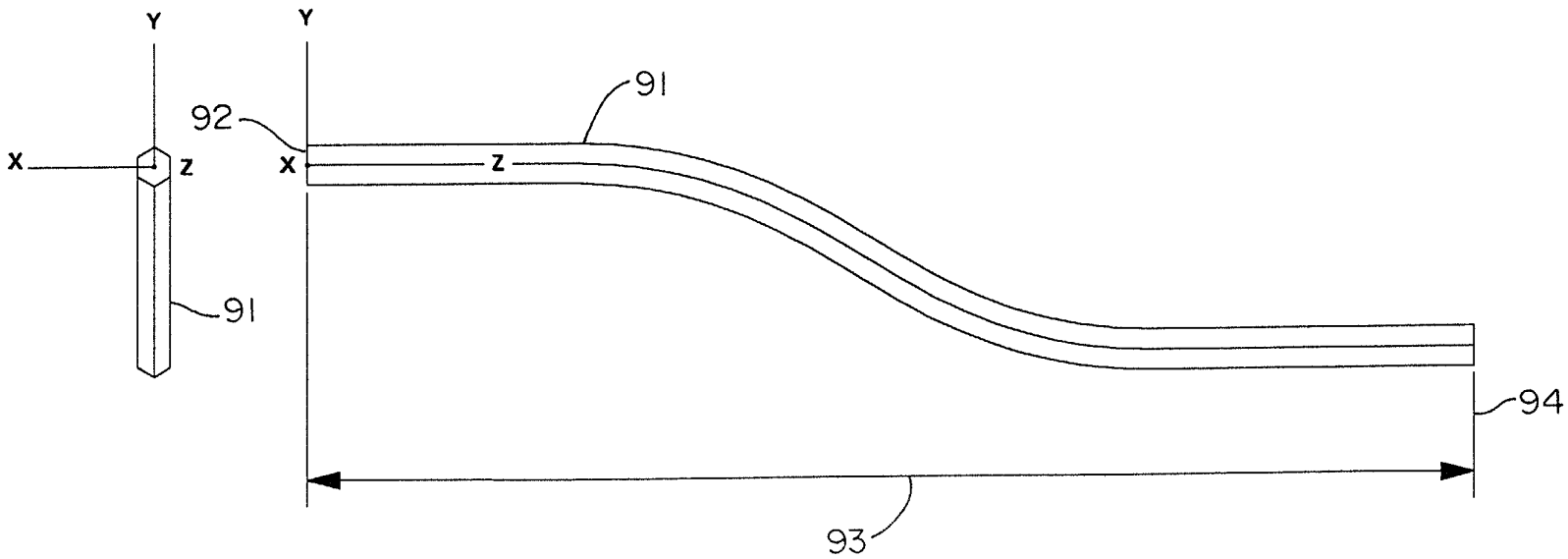


Fig. 12

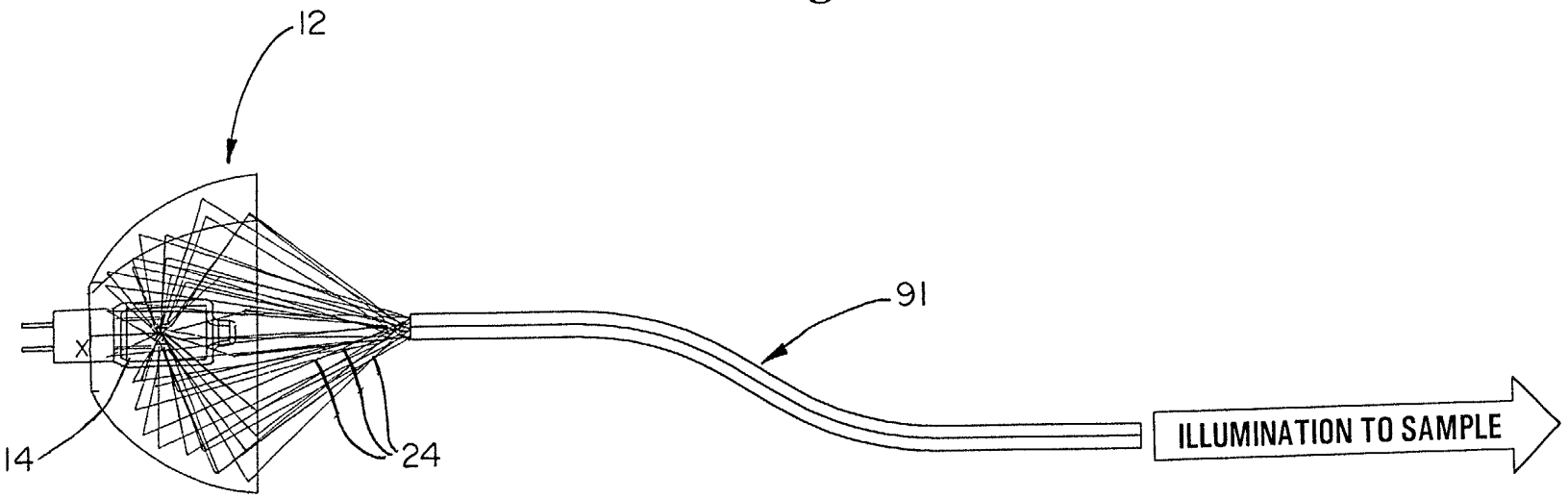
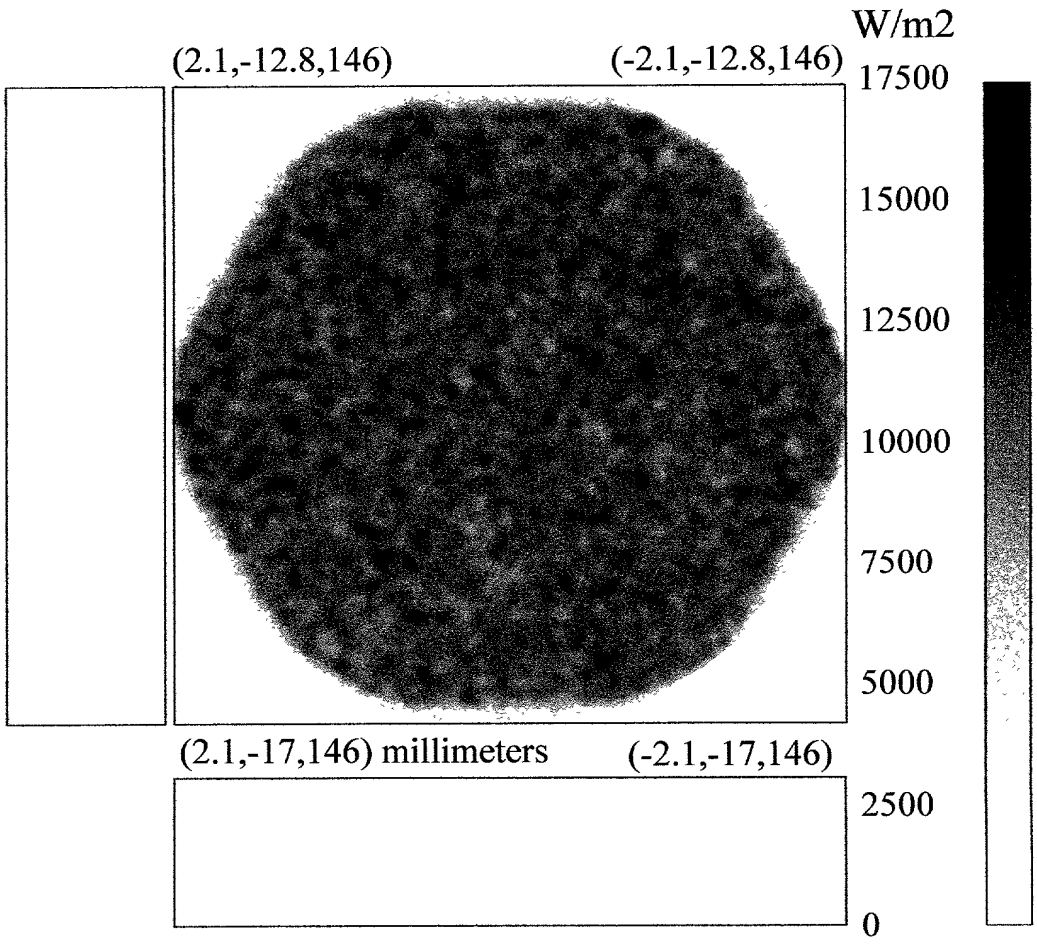
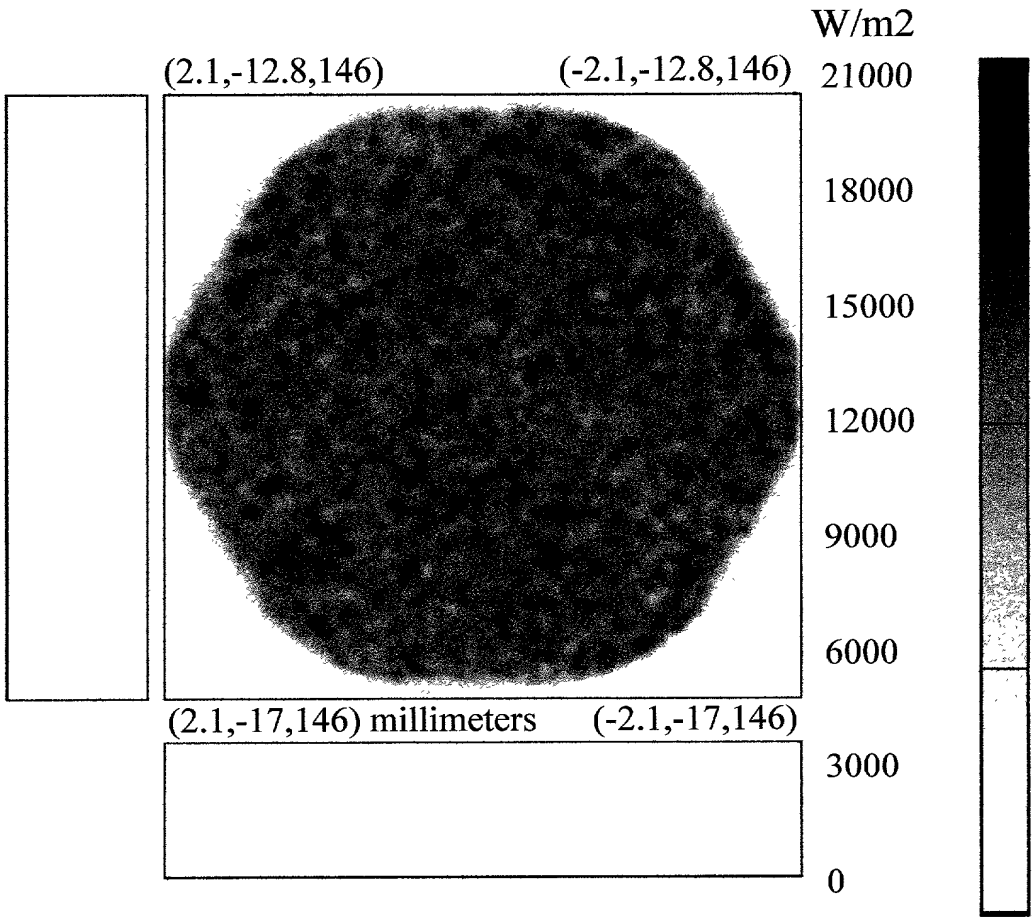


Fig. 13a



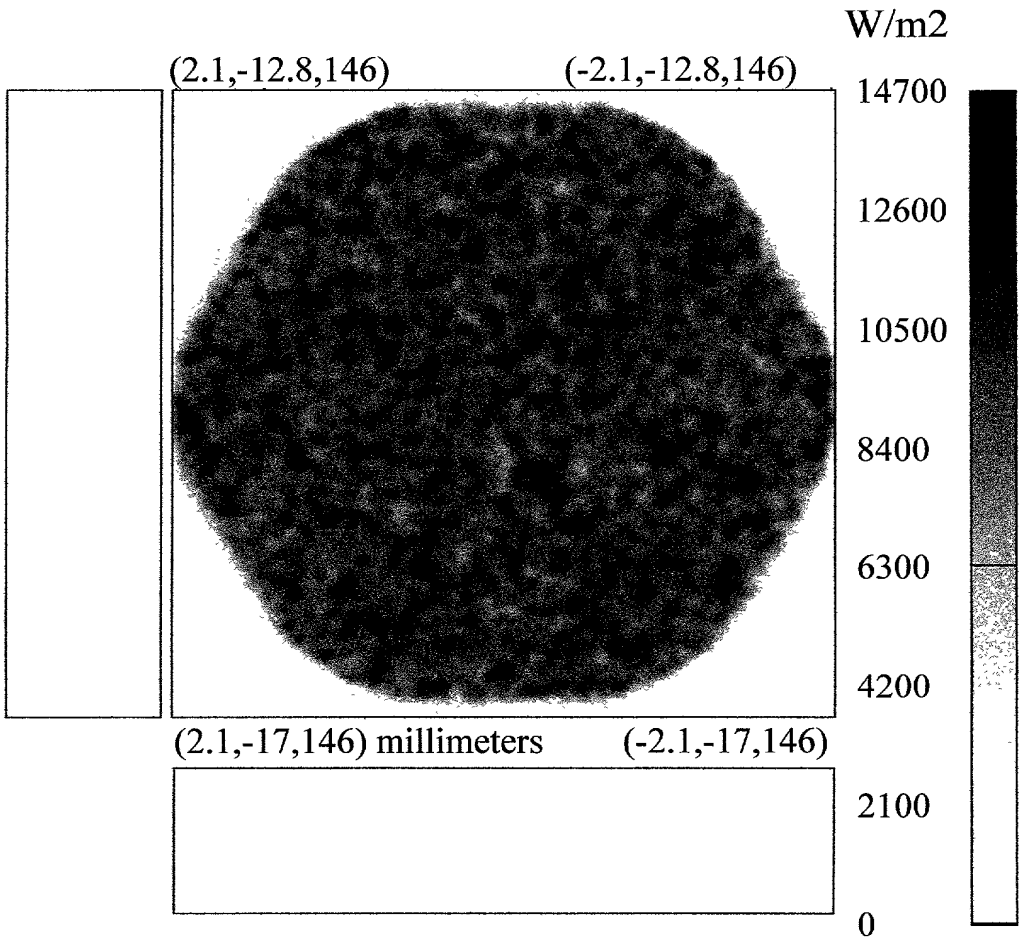
Irradiance Min:0.00023071 W/m2, Max:15747 W/m2,
Normalized Flux:0.14181 116810 Incident Rays

Fig. 13b



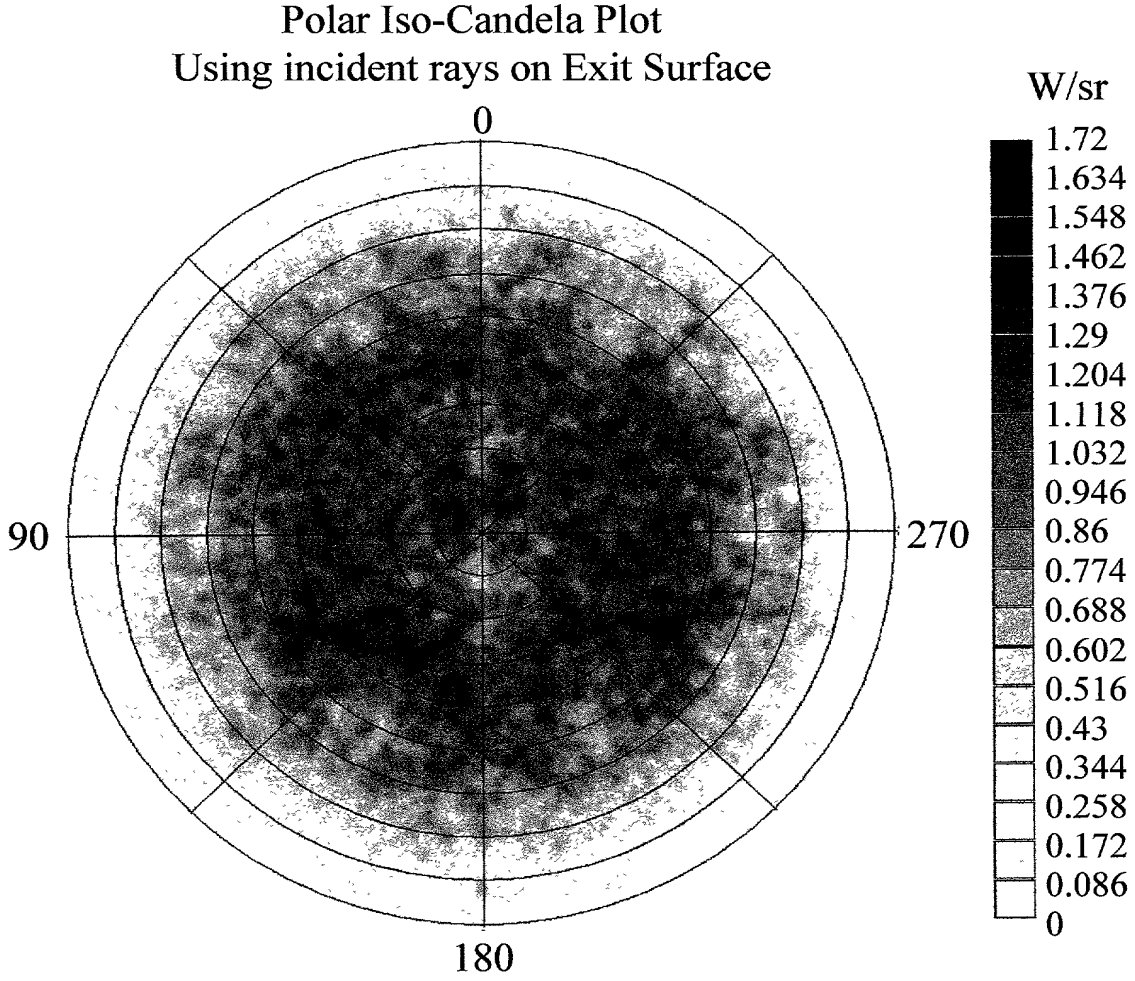
Irradiance Min:0.00032399 W/m2, Max:19613 W/m2,
Normalized Flux:0.17434 114383 Incident Rays

Fig. 13c



Irradiance Min:5.3024e-005 W/m2, Max:14361 W/m2,
Normalized Flux:0.12676 86490 Incident Rays

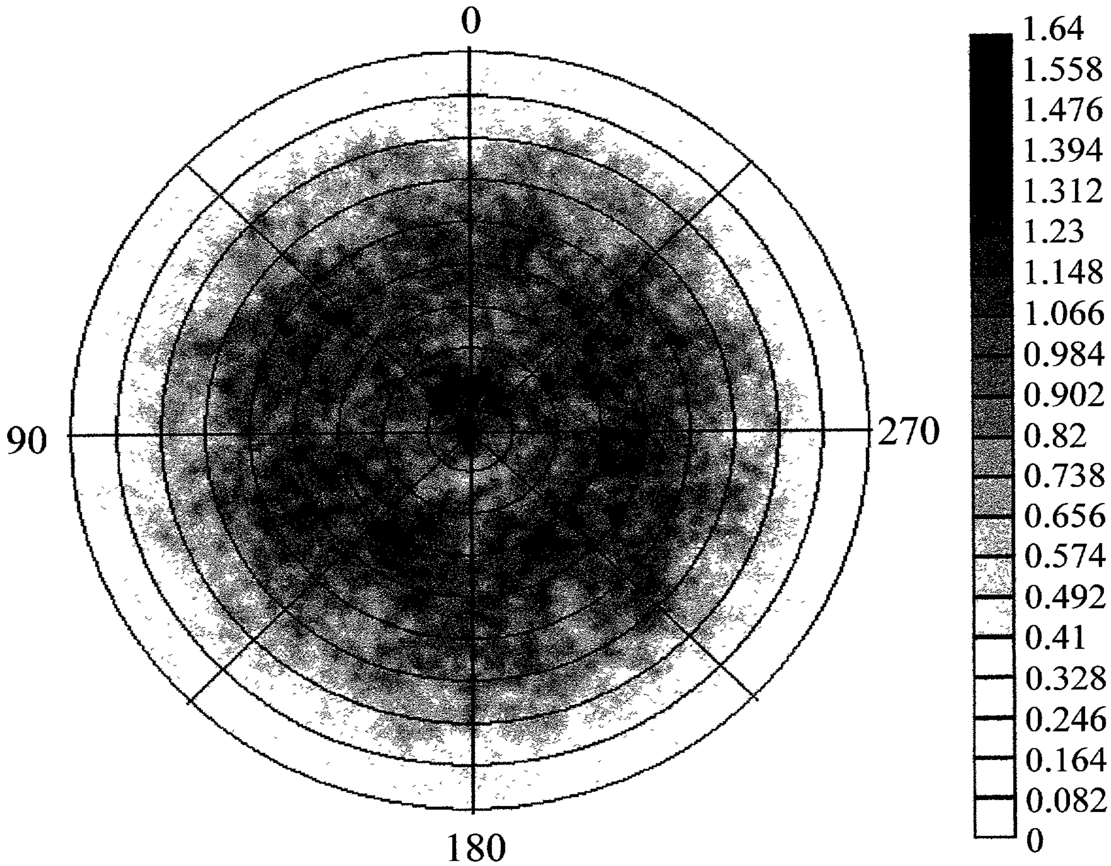
Fig. 14a



Data covers +/- 50.000 degrees from Normal
Collected Flux: 1.3936 W, 116196 Rays
Min:2.4814e-008 W/sr, Max:1.7072 W/sr,
Total Flux: 1.401 W

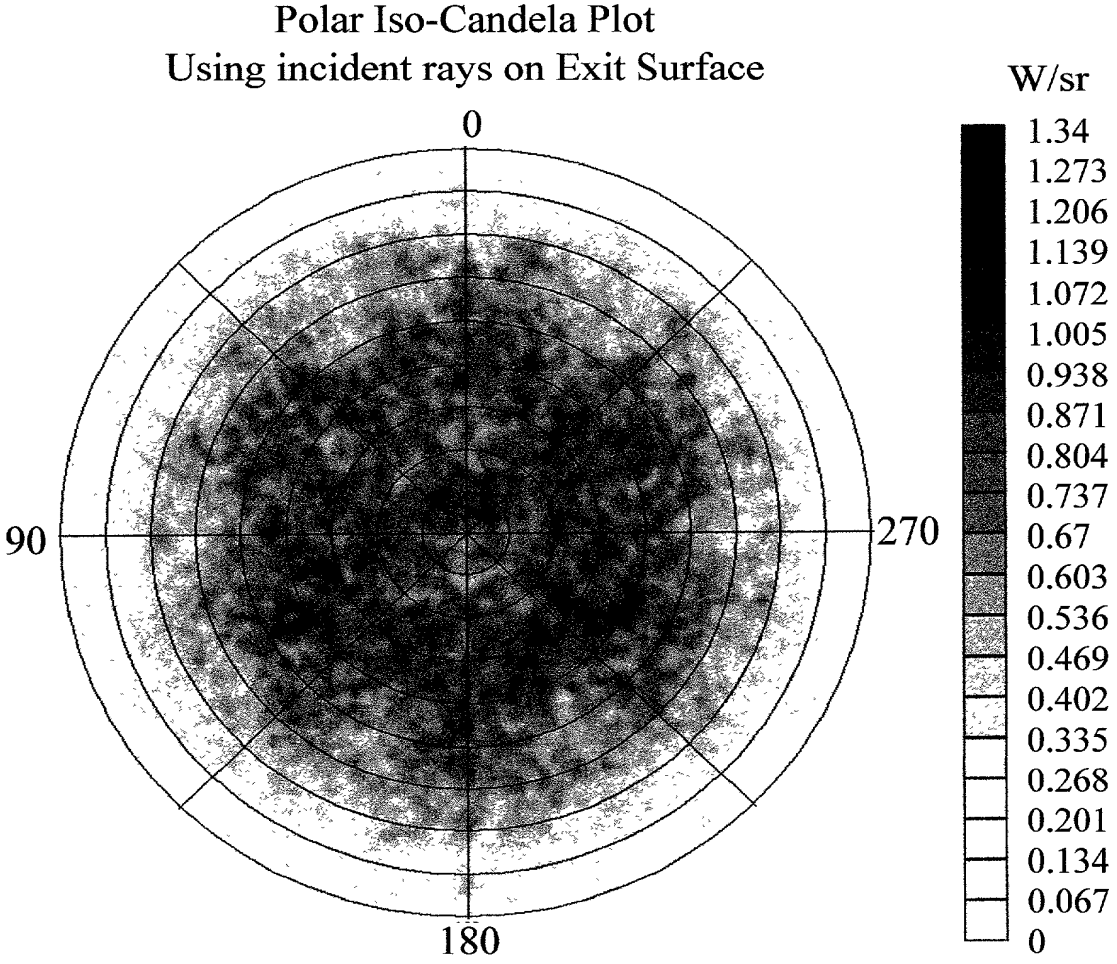
Fig. 14b

Polar Iso-Candela Plot
Using incident rays on Exit Surface



Data covers +/- 50.000 degrees from Normal
Collected Flux: 1.3649 W, 113799 Rays
Min:1.1537e-008 W/sr, Max:1.6245 W/sr,
Total Flux: 1.3719 W

Fig. 14c



Data covers +/- 50.000 degrees from Normal
Collected Flux: 1.0319 W, 86036 Rays
Min:7.852e-008 W/sr, Max:1.323 W/sr,
Total Flux: 1.0373 W

Fig. 15

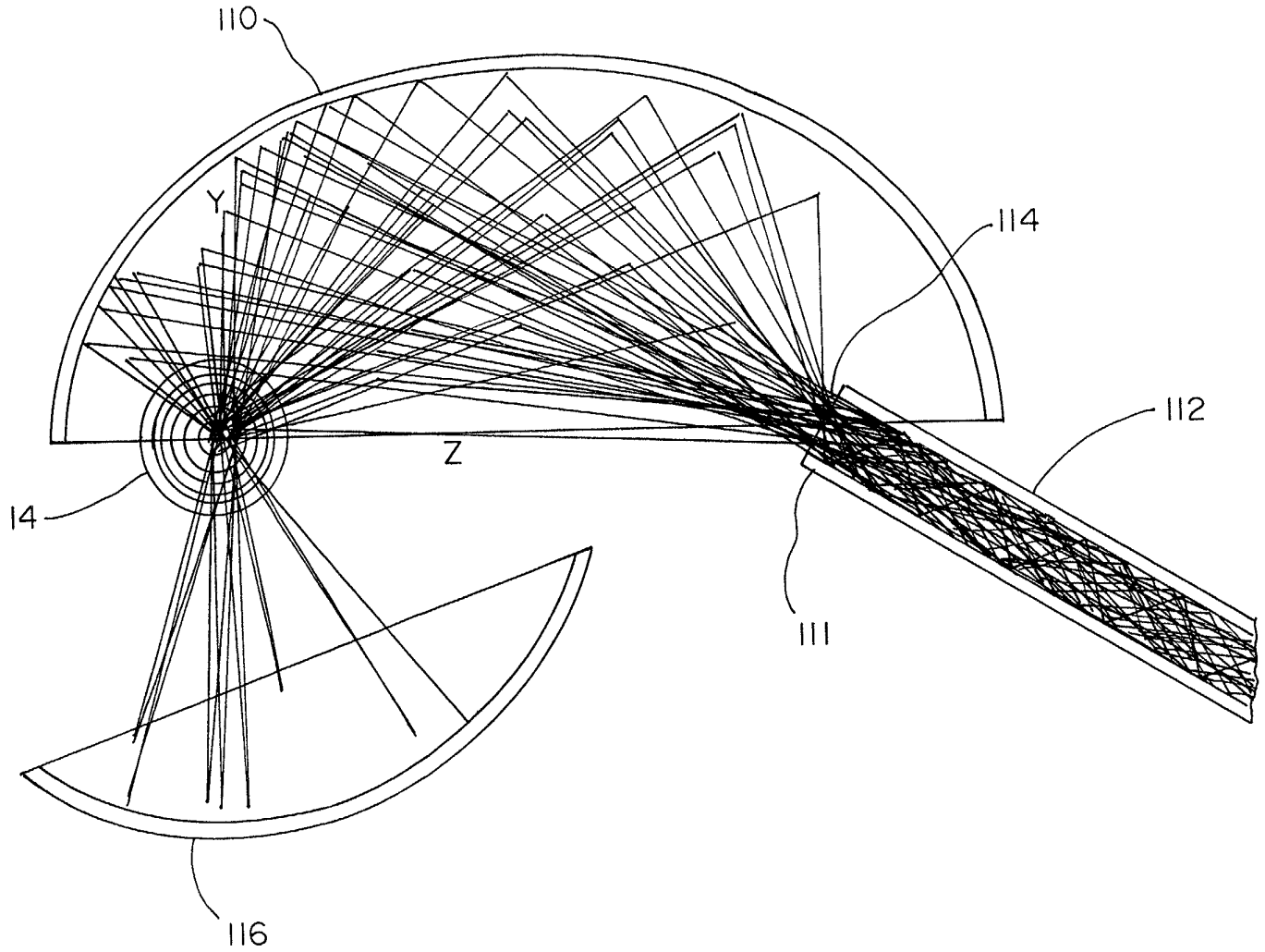


Fig. 16

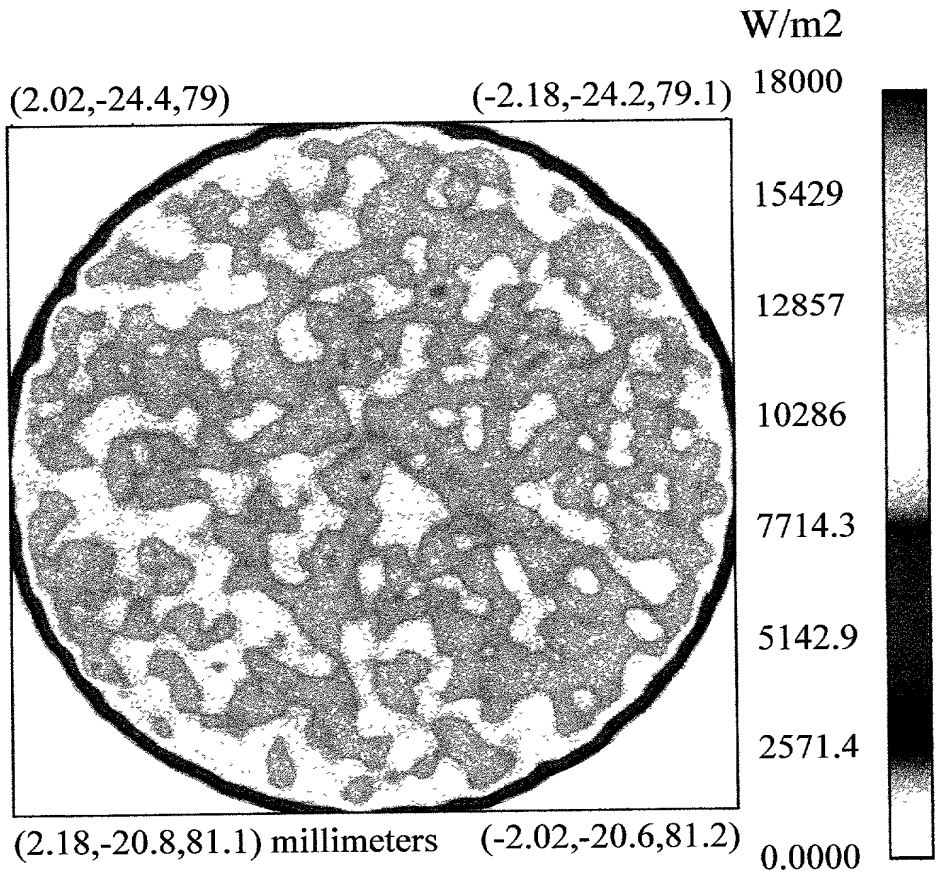
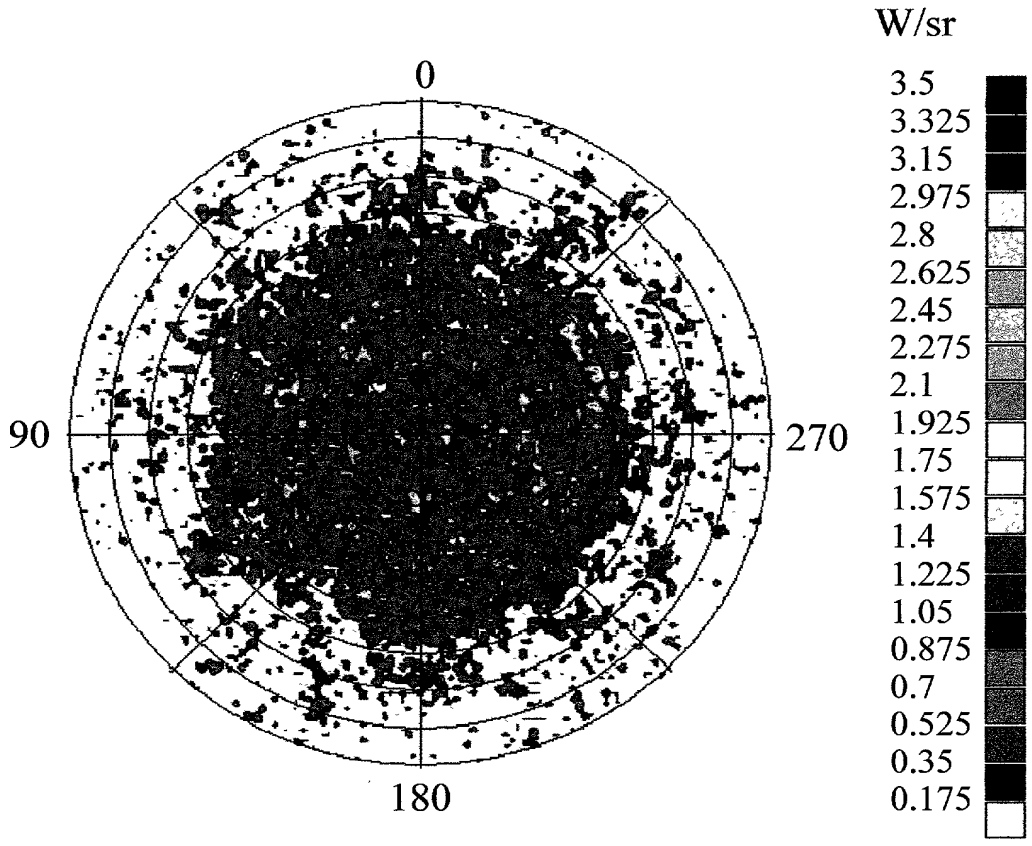

W/m2
(2.02,-24.4,79)
(-2.18,-24.2,79.1)
18000
15429
12857
10286
7714.3
5142.9
2571.4
0.0000
(2.18,-20.8,81.1) millimeters
(-2.02,-20.6,81.2)

Fig. 17



Data covers +/- 40.000 degrees from Normal

Fig. 18

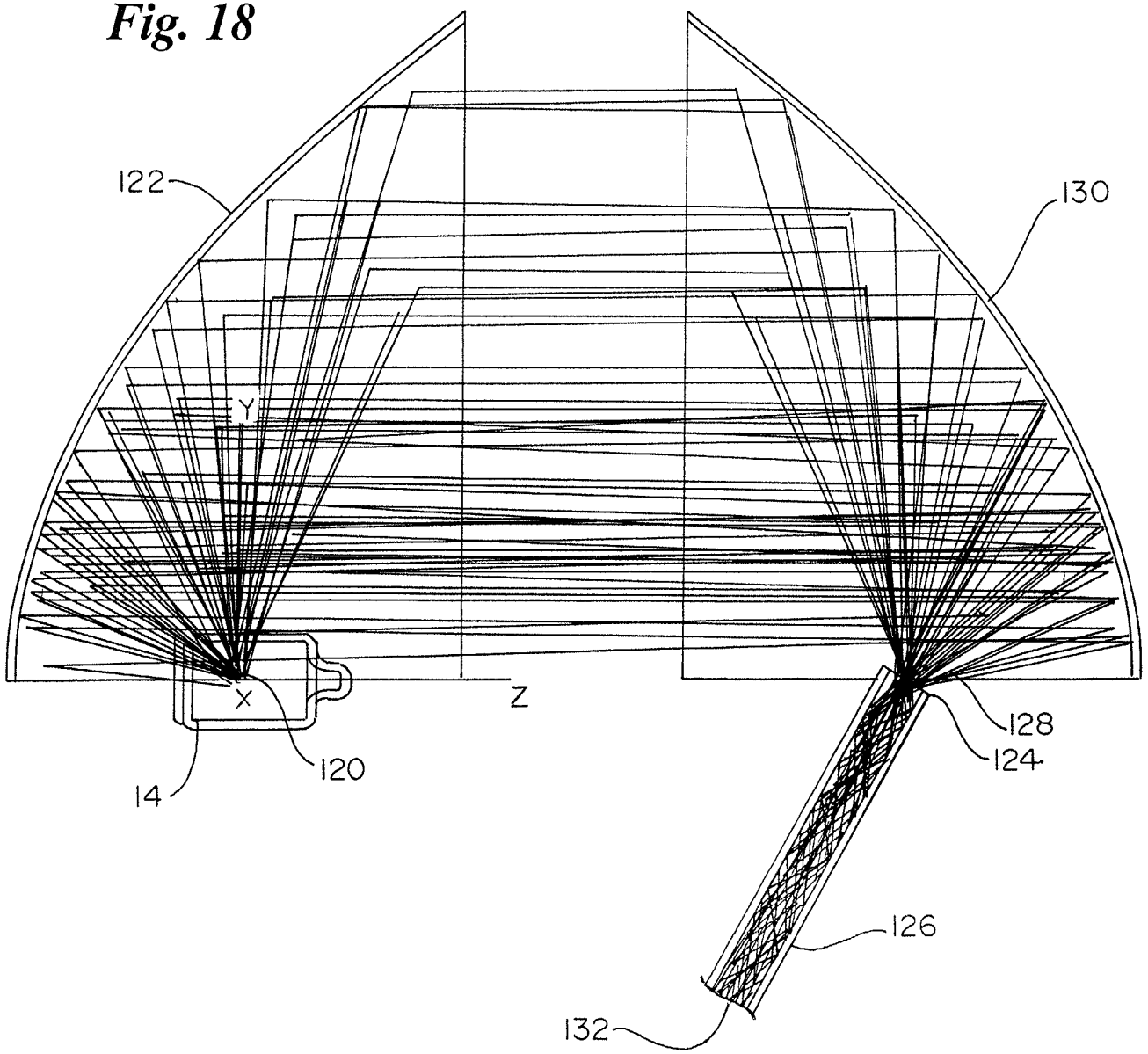


Fig. 19

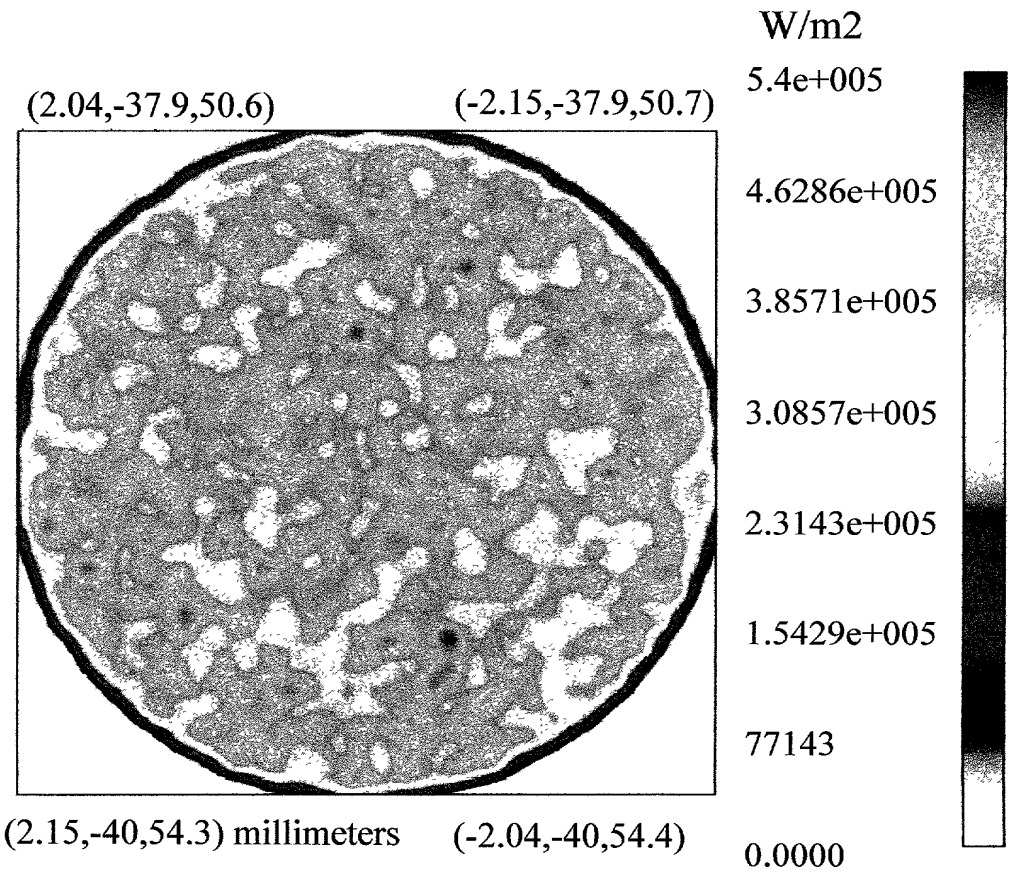
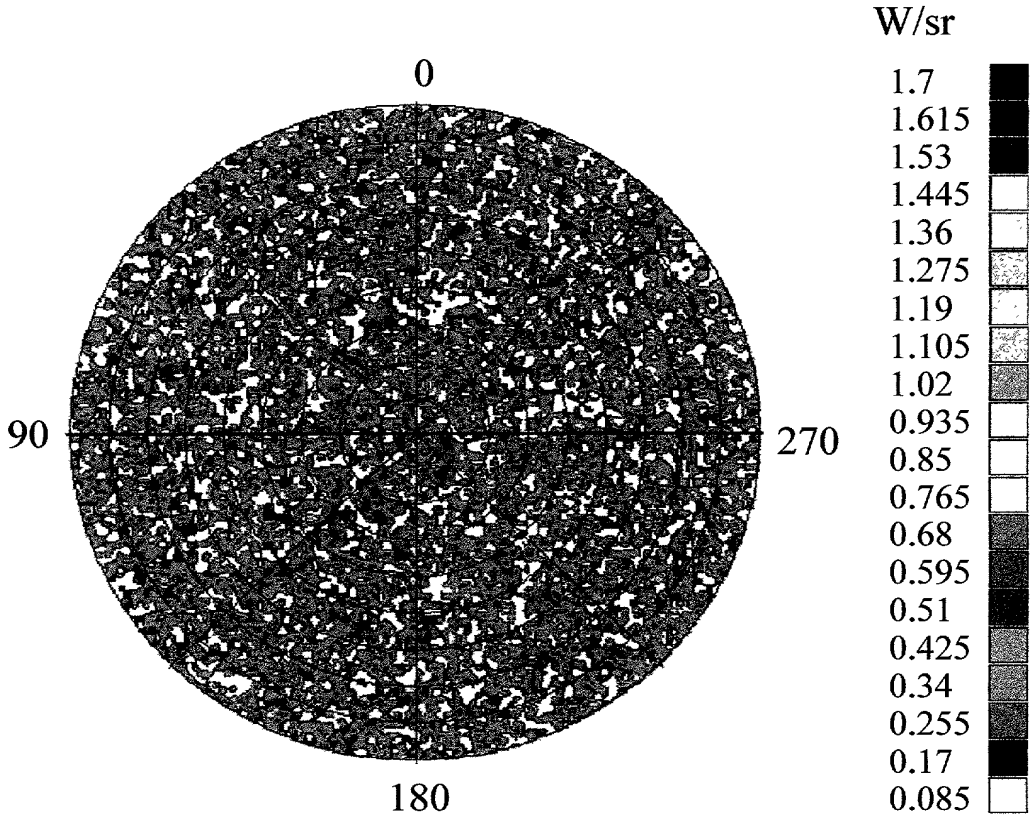


Fig. 20



Data covers +/- 40.000 degrees from Normal

Fig. 21

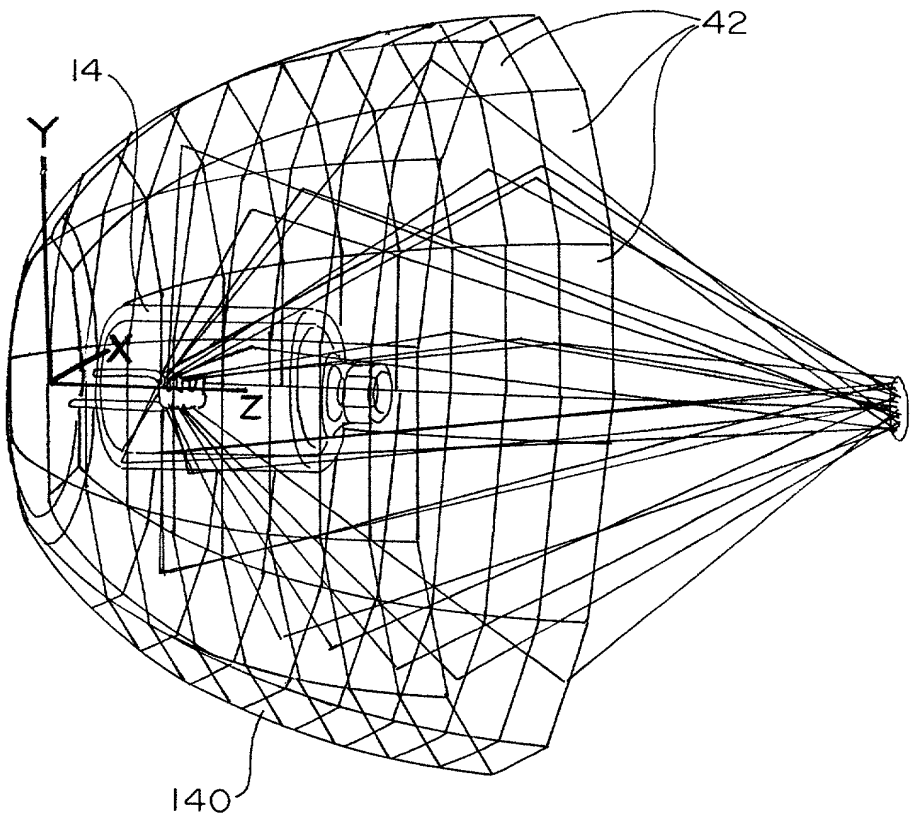
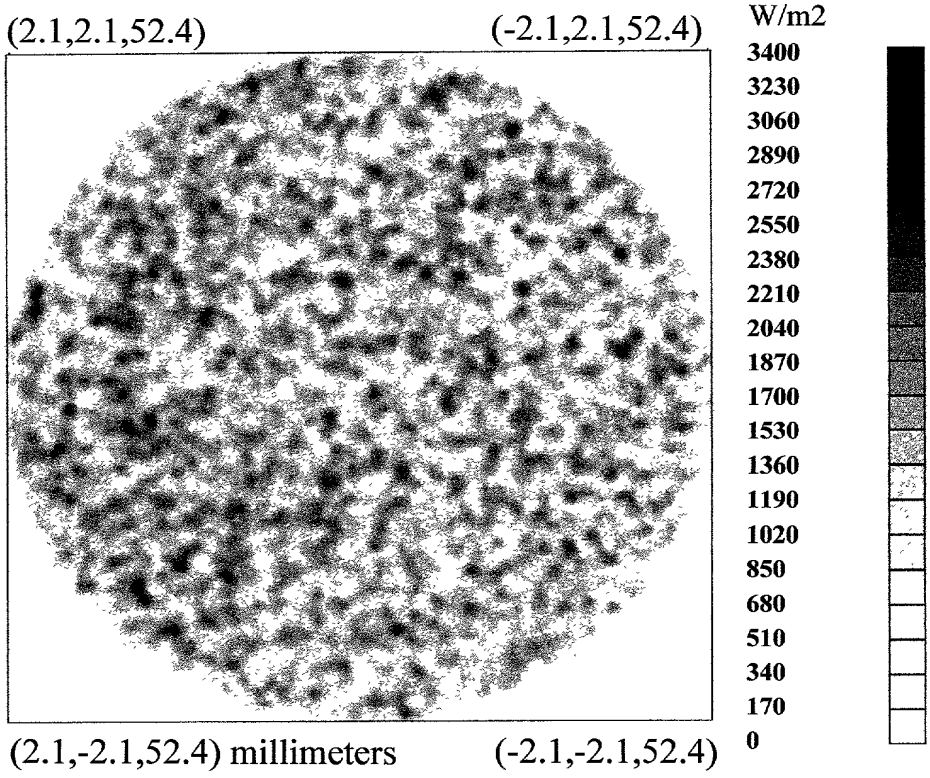


Fig. 22

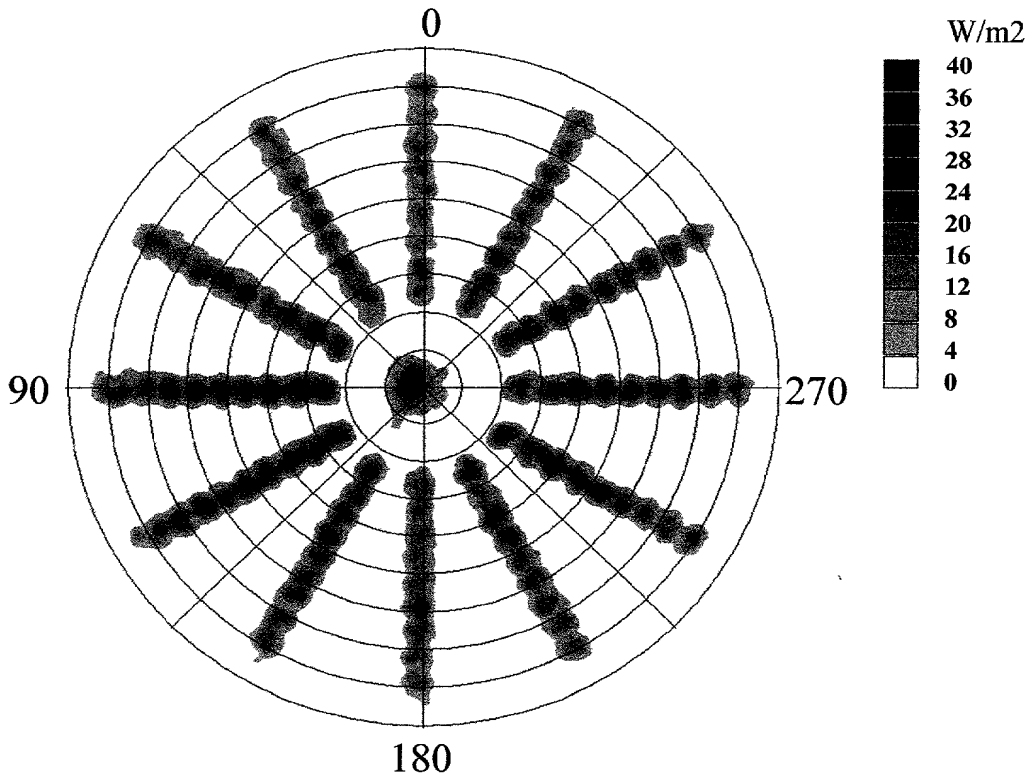
Total – Irradiance Map for Incident Flux
Exit Surface



Irradiance Min:0.249e-005 W/m2, Max:3265.5 W/m2,
Normalized Flux:0.018369 16288 Incident Rays

Fig. 23

Polar Iso-Candela Plot
Using incident rays on Exit Surface



Data covers +/- 50.000 degrees from Normal
Collected Flux: 7.1784W, 16288 Rays
Min:2.1681e-009 W/sr, Max:39.106W/sr,
Total Flux: 7.1784W

Fig. 24

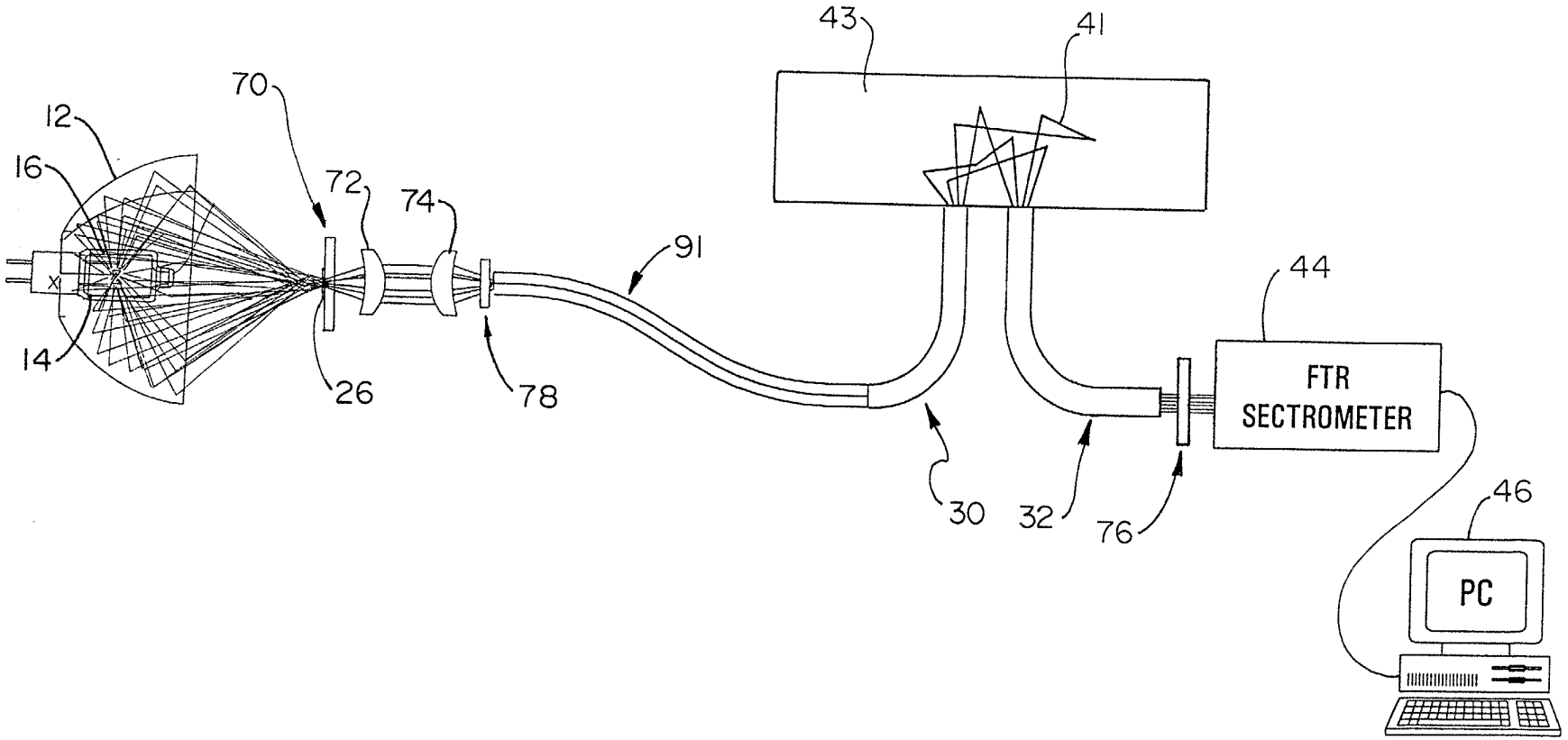


Fig. 25A

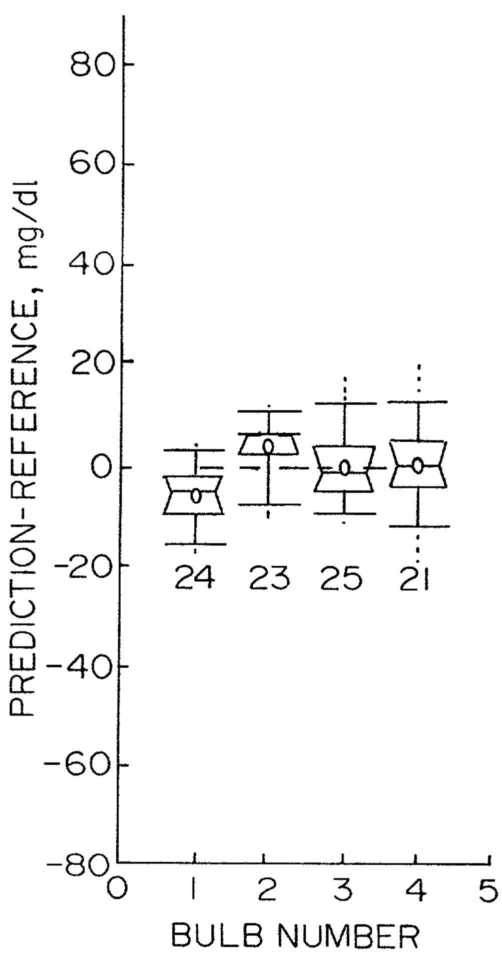


Fig. 25B

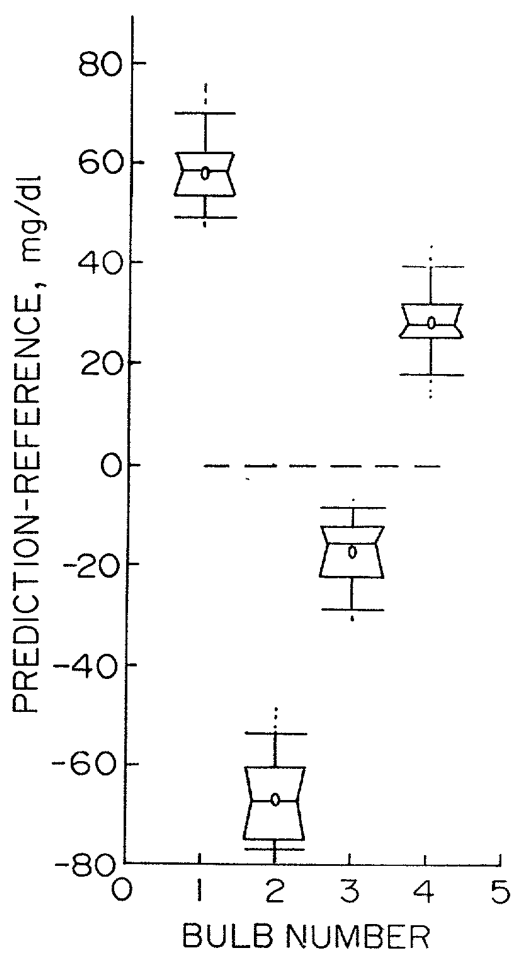


Fig. 25C

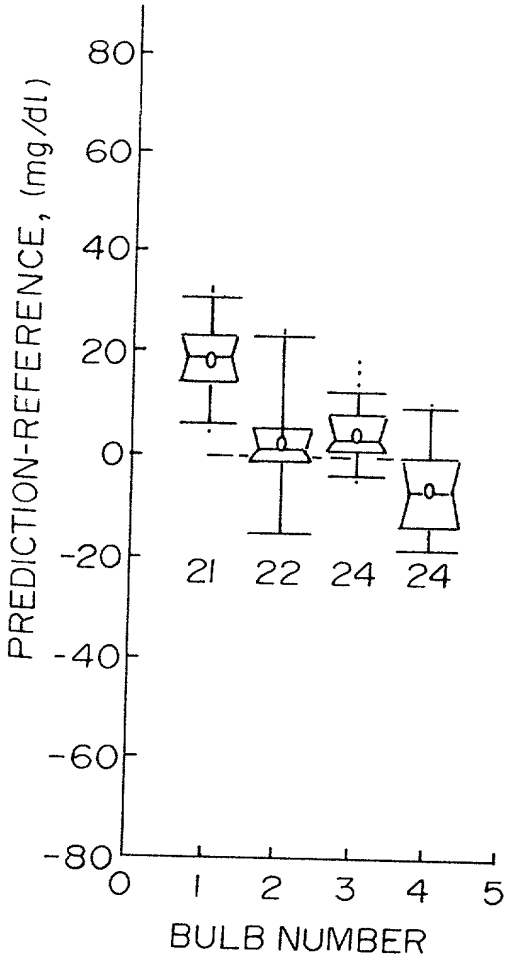


Fig. 25D

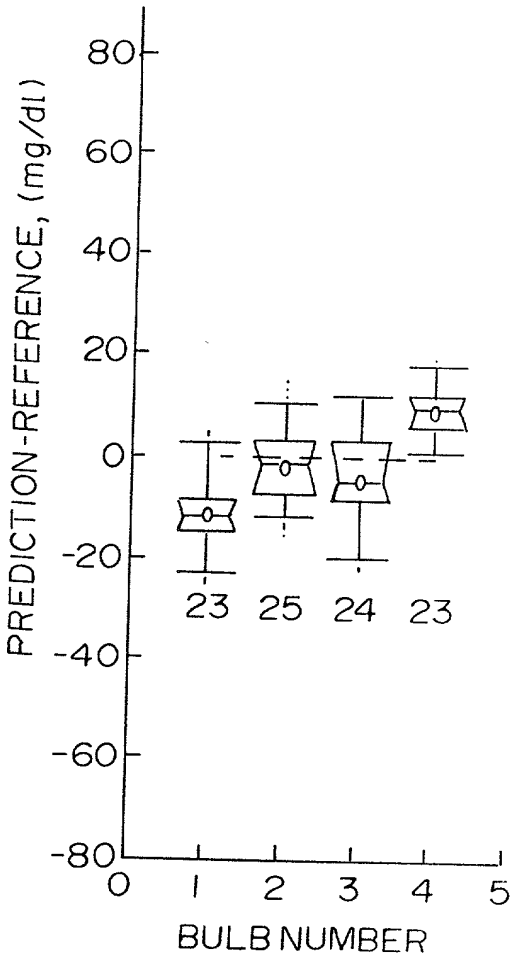


Fig. 26

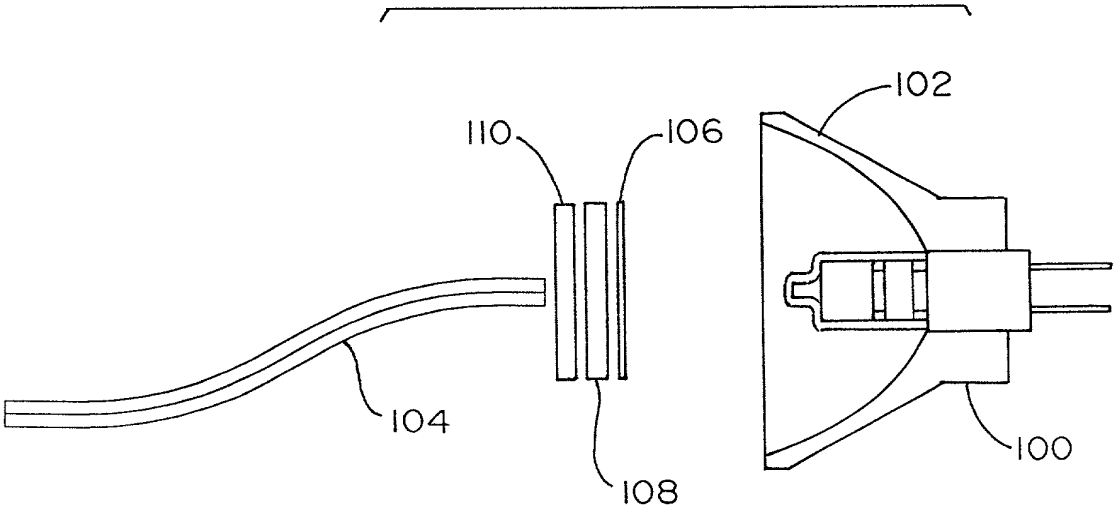
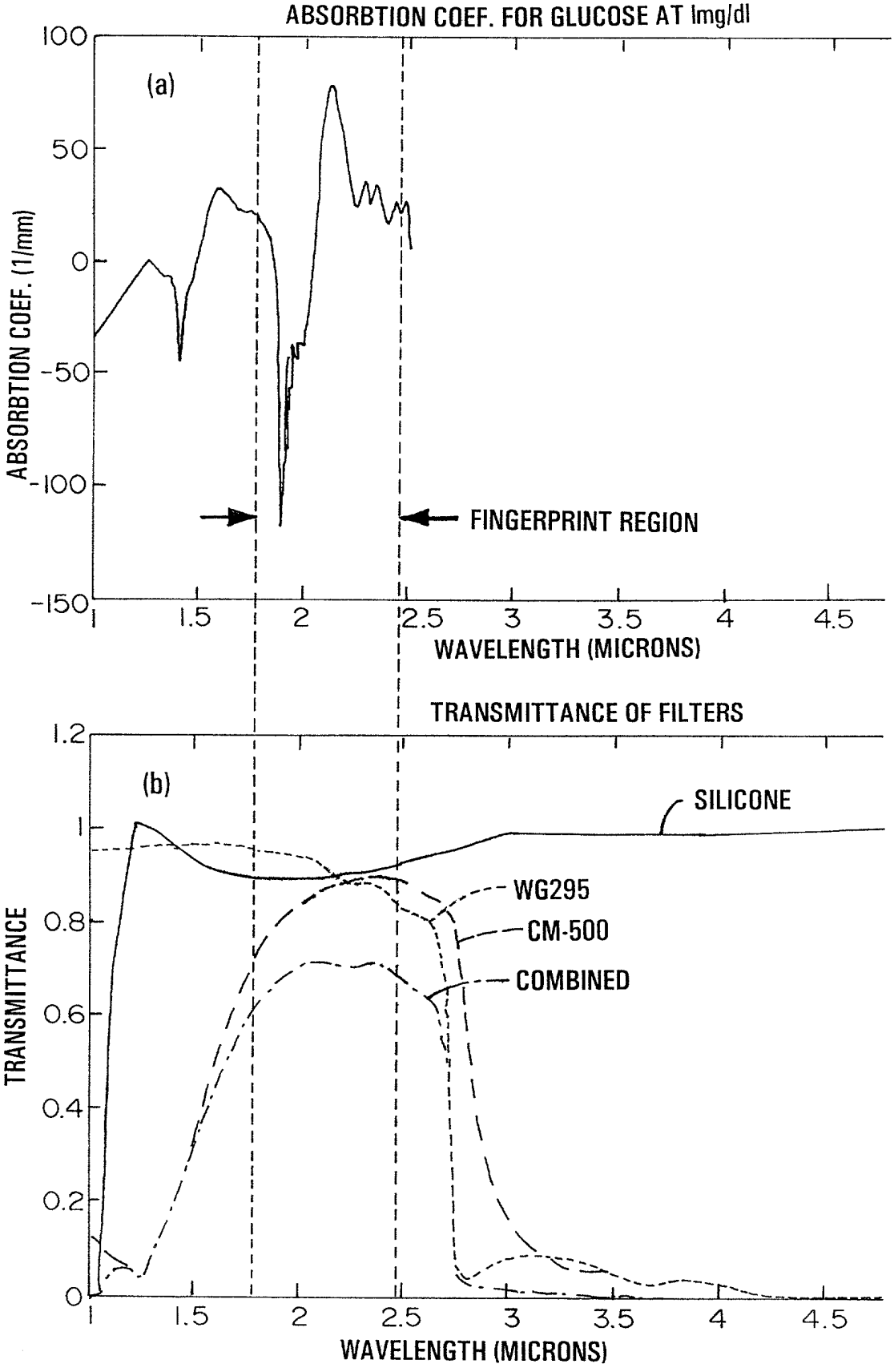


Fig. 27


ABSORBTION COEF. FOR GLUCOSE AT Img/dl
(a)
ABSORBTION COEF. (1/mm)
100
50
0
-50
-100
-150
FINGERPRINT REGION
1.5
2
2.5
3
3.5
4
4.5
WAVELENGTH (MICRONS)
TRANSMITTANCE OF FILTERS
(b)
SILICONE
WG295
CM-500
COMBINED
TRANSMITTANCE
1.2
1
0.8
0.6
0.4
0.2
0
WAVELENGTH (MICRONS)